

Reconstructing the South Theatre at Jerash

Frank SEAR

Centre for Classics and Archaeology
School of Fine Arts, Classical Studies and Archaeology
University of Melbourne
Victoria 3010
AUSTRALIA
Fax: 61 3 8344 4161
E-mail: fsear@unimelb.edu.au

Andrew HUTSON

Faculty of Architecture, Planning and Building
University of Melbourne
Victoria 3010
AUSTRALIA
Fax: 61 3 8344 5532
E-mail: a.hutson@architecture.unimelb.edu.au

Abstract

A team from the University of Melbourne made a detailed architectural survey of the South Theatre at Jerash in 1994-6. In addition to the survey a study was made of several thousand architectural fragments which were stored behind the theatre. This allowed a reconstruction to be made of the missing upper order of the scaenae frons. As the original survey had been made digitally the information was used to produce digital reconstructions of the missing parts of the theatre as well as a visualisation of the theatre as it may have looked in Roman times. The value of such digital recording and computer reconstructions is that they can easily be altered to take account of new evidence.

Introduction

The South Theatre at Jerash was surveyed in 1994-6 as part of an ongoing study of Roman theatre architecture by a team from the University of

Melbourne.¹ The survey was part of the Australian Roman Theatres project, funded by a grant from the Australian Research Council. The project began in 1990 and since then the theatres surveyed completely or in part are those at Gubbio, Volterra, Pompeii, Taormina, Orange, Cales and Benevento. The Jerash theatre was chosen for three main reasons. Firstly it has a number of unusual architectural features. The most unusual, discovered by the team in 1992, it shares with the theatre at Taormina in Sicily. Both theatres have a rectilinear *scaenae frons*, but the podia on which the columns stand recede around the doorways to form semicircular niches. Semicircular podia in combination with a rectilinear *scaenae frons* are not in themselves uncommon — they are found in several other theaters of Asia Minor and the Levant, such as Hierapolis in Turkey and the Large Theatre at Philadelphia (Amman). However in both Taormina and Jerash the columns next to the doorways are slotted into the wall. The aim was no doubt to give the impression that the doorways are set within fully semicircular niches, as they are in a number of theatres, e.g. Benevento in South Italy, Bostra in Syria, and Sabratha in Libya. This aspect of the theatre has been fully discussed in earlier articles and will not be discussed further here.²

The second reason the theatre was chosen was because it is well documented epigraphically, which is of great importance in the case of a building which has never been excavated stratigraphically and where no excavation was envisaged. The wealth of epigraphic material means that the date of the South Theatre of Jerash can be established within close limits. An inscription dating to between AD 83-96 records that a certain T.Flavius donated 3,000 drachmas to build a *kerkis* of the theatre.³ An inscription dating to AD 90 records the consecration of the *theatron*,⁴ but the whole theatre was not complete at this time.⁵ A cylindrical stone basis found near the west end of the stage with a long inscription dating to between AD 102-114 suggests that the *scaena* is Trajanic.⁶

The final reason the theatre was singled out for study is its excellent preservation. It is a monument which has been relatively undisturbed over the centuries. Ulrich Seetzen in the account of his travels, published in

¹ The team that worked at Jerash included Barry Rowney, Chris Little, Shane Harvey, Scott Newman, Zig Kapelis, Maurice Smith and the authors.

² Sear 1992-33, pp.185-7; Sear 1996a, pp.217-230, Sear 1996b, pp.41-79.

³ Jones 1928, pp.152-3, no. 13.

⁴ By *theatron* I understand the place where the audience sat. See *CIL* X 833-5 from the Large Theatre at Pompeii where *theatrum* is distinguished from *crypta* and *tribunalia* and can only refer to the seating of the cavea.

⁵ Pouilloux 1977, pp. 246-54; Pouilloux 1979, pp.276-8.

⁶ Jones 1928, pp. 153-6, no. 14.

1810, mentions 'two superb amphitheatres'.⁷ In 1818 when Irby and Mangles visited they spent a week there and praised the scene of the large theatre as 'singularly perfect'.⁸ The excellent state of preservation of the theatre is confirmed in the earliest photographs taken of it, brought back by a small party led by Charles Warren of The Palestine Exploration Fund, which was established in 1865. A photo of the theatre from the north taken in 1877-1889⁹ shows the *ima* and most of the *summa cavea* standing as well as several columns of the *scaenae frons*, including the two with a section of architrave at the east end of the *scaenae frons*.¹⁰ In 1925, following the appointment of John Garstang as the first Director of the Department of Antiquities in Jordan, conservation work began on the South theatre under the direction of George Horsfield.¹¹ Horsfield cleared the orchestra and revealed the whole stage area, and the architectural fragments from the upper part of the *scaenae frons* were collected and placed in the orchestra to await study.¹² When the restoration of the South Theatre began 1953 most of the *ima cavea* was relatively intact including the vaults over the *aditus maximi*; the central two *cunei* of the *summa cavea* stood almost to their full height and only the top few rows of seats were damaged in the lateral parts of the *summa cavea*. However most of the outer casing around the *summa cavea* had been destroyed and only the footings of the stage front survived *in situ*. Remarkably, all the podia of the *columnatio* still stood as well as some of the columns. In fact a pair of columns at the west end and another on the east side survived complete with capitals along with the architrave they supported. The *scaenae frons* wall itself stood in parts to a height of 10 or 11 courses of masonry, almost to capital height. In the 1953 restoration the three doors of the *scaenae frons* were rebuilt using new material in the pediments and reinforced concrete beams were inserted inside the lintels. The arched entrances at the sides of the stage were rebuilt, as well as both arched entrances into the orchestra and the *tribunalia* above them. In 1956 funding ran out and it was some years before the stage and *proscenium* wall were finished (Fig. 1). Later on the orchestra and cavea were cleared and the upper seating consolidated. In the course of this work several hundred carved blocks belonging to the upper order of the *scaenae frons* collected by Horsfield were removed from the orchestra and deposited behind the theatre. Work continued on the theatre throughout the 1970's and

⁷ This is presumably a reference to the North and the South theatres. Seetzen, 1810.

⁸ Irby and Mangles 1832.

⁹ Cliché Bonfils. Neg. H.S.M. 976, fiche 8C.5, in the Harvard Semitic Museum.

¹⁰ The photo is published by Seigne 1989, fig. 15.

¹¹ A plan of the building appeared in an article by Austen and Harrison 1927, pl. 1.

¹² Fisher, in Kraeling 1938, p.20.

large sections of the outer wall of the theatre were rebuilt as part of the Petra/Jerash project.

The unusual design features were the starting point of our interest in the theatre, but when the survey began it became clear that there was sufficient material available for us to make a complete restoration of the building. Not just a paper reconstruction but a physical one.¹³ There was an enormous quantity of well-preserved architectural material from the *scaenae frons* deposited behind the theatre. We calculated that there were about 4,000 blocks and that the work of cataloguing them would take us two seasons.

The reconstruction

The cavea

The theatre is c.76 metres wide and faces north. Its cavea is built against the hill of the Temple of Zeus. The lowest 14 rows of seats, the *ima cavea*, seems to have been cut into the hillside and around it a rock-cut path runs at approximately the level of the *praecinctio* dividing the *ima cavea* from the upper parts of the cavea. The *ima cavea* has 14 rows of seats, divided into four *cunei* and the *praecinctio*, 2.19-2.21 metres wide, is surrounded by a podium (Fig. 3). Originally there was a 15th row of seats which stood around the rim of the *praecinctio*. Most of these seats have disappeared, although 15 fragments can still be seen at intervals along the corridor. They had high backs, which suggests that they were for persons of importance, and were 56 cm deep, including the overhang at the front and 49 cm without it. When placed over the cuttings behind the top row of seats they reduce the width of the *praecinctio* to 1.04-1.06 metres. The best-preserved seat (the last one on the west side) has a back 87 cm high and a seat 44 cm high. The back is broken at the top and was originally somewhat higher. On the analogy of similar high-backed seats in the theatre of Amman and the West Theatre at Umm Qais, the Jerash seat can be restored as a little over a metre high.¹⁴ The floor level of the *praecinctio* was probably at the bottom of the two rows of orthostates which form the podium around the *praecinctio*. This is about 29 cm above the level of the foot-rests of the seats with high backs. Thus the paving of the *praecinctio* would have been about 70-75 cm below

¹³ The Director of Antiquities at the time, Dr. Gazi Bisheh, expressed interest in restoring the upper storey of the *scaenae frons*.

¹⁴ At Amman the back is 1.08 metres high and the seat 47 cm high × 57 cm deep. At Umm Qais the seat is 43 cm high and the back 1.12 metres high × 65 cm deep.

the top of the backs of the seats around the *praecinctio*. These would have formed a kind of inner wall to the *praecinctio*. The diverging staircases built into the thickness of the podium wall separating the *ima* from the *summa cavea* look extremely odd because they are totally exposed to view. Normally one would expect a thin section of walling to hide them as can be seen for example in both the large and small theatre at Amman, the theatre at Philippopolis, and the theatre at Bostra. The present arrangement looks very much like Butler's restoration of the large theatre at Amman.¹⁵

The hillside flattens out a little above the level of the *praecinctio* with the result that the upper part of the cavea had to be supported on an *aggestus* or earth fill. The fill, which probably came mainly from the earth removed to shape the *ima cavea*, was contained by the heavy walls of the *analemmata*. It was further compartmentalised by four pairs of walls flanking the passageways into the *praecinctio*. These passages are vaulted over with rising vaults composed of a series of stone arches, which correspond to the rows of seats above them. Of the upper part of the cavea 15 rows of seats survive, divided by staircases into 8 *cunei*, bringing the present overall height of the theatre, measured from the orchestra, to 16.28 metres. However there is room for many more rows of seats. The distance from the outer wall of the cavea to the edge of the rim of the top surviving seat is 7.80 metres. The seats near the top of the cavea are 46 cm high × 76 cm deep including the moulded rim which projects 10 cm. Therefore they are 66 cm wide from rim to rim. There are two ways the seating could have continued. Firstly it could simply have continued higher without any break, which means that the theatre had no *media cavea*. Therefore if there was a simple *praecinctio*, 1.05 metres wide like the lower *praecinctio*, and a balustrade, perhaps 80 cm wide, at the top there would be space for a further 9 rows of seats. The width of the top row would of course be in addition to the width allowed for the *praecinctio*. This would bring the total number of rows in the *summa cavea* to 24, a large number in view of the fact that there are only 14 in the *ima cavea*. It would also bring the overall height of the cavea to 20.42 metres. In addition the height of the balustrade might add a further 1.20 metres.

There are some difficulties in assuming a *summa cavea* of this size, because it is disproportionately large compared with the *ima cavea*. Allowing 50 cm per seat there are about 1250 places in the *ima cavea*. In fact this number of seats is confirmed by the numbers which appear on the seats of the outer *cunei* which are numbered, starting from the bottom row, from

¹⁵ Butler 1907, pl. IV.

right to left, from A to COH. This gives a total of 278 seats in each of the four *cunei*. If the top row of seats with backs is added this comes almost exactly to 1250. Using the same method of calculation the 24 rows of the *summa cavea* would provide seating for 3,900.

There is however the possibility that the top row of seats which survives represents the top row of the *media cavea* and that there was a *summa cavea* above that. If there was a *praecinctio* at this point, the same width as the lower *praecinctio*, 2.20m, and surrounded by a podium of similar height, and a *praecinctio* and balustrade at the top of the cavea of the same dimensions as the ones given above then there is space for a *summa cavea* with a podium wall 62.5 cm wide and 5 rows of seats, 62.5 cm wide. The seats of the *summa cavea* were often somewhat narrower than those of the *media*, because it is common for each section of the cavea to slope slightly more steeply than the one below it. At Bostra the seats are 59 cm wide, 41.5 cm high in the *ima cavea*; 55 cm wide, 47.5 cm high in the *media cavea*; and 50 cm wide, 47.5 cm high in the *summa cavea*. At Philadelphia the seats are 72.5 cm wide, 42 cm high in the *ima*; 69 cm wide, 45 cm high in the *media*; and 67 cm wide, 45 cm high in the *summa cavea*. This arrangement gives a better balance of seating. The *ima cavea* with 15 rows would accommodate 1,250 spectators; the *media cavea* with 15 rows 2,200; and the *summa cavea* with 5 rows 1,250.

The following table gives the seating arrangements in a number of Levantine theatres:

Theatre	Ima cavea	Media cavea	Summa cavea
Bostra	14	18	6
Caesarea	13	?13	?6
Cyrrhus	25	?14	?12
Daphnai	17	?25	
Petra	11	23	10
Philadelphia	13	14	16
Samaria	14	10	?5
Scythopolis	13	14	?9
Sepphoris	12	12	10

It will be noted that these theatres, all in the same region as Gerasa have three *maeniana* except Daphnai, where the excavators restored an enormous *summa cavea* with 25 rows of seats.¹⁶ There is no evidence for this and it is equally possible that it too had three *maeniana*. A cavea with three *maeniana* at Gerasa may also explain why the seating stops in the abrupt way it

¹⁶ Wilber, in Stillwell 1938, pp.57-94.

does. Old photographs show that the seating finished in a fairly clean line at the 15th row. If there was a separate *summa cavea* separated from the *media* with a podium wall it would have been a somewhat fragile structure, prone to damage and easy to rob. On the whole therefore it seems likely that there was a *summa cavea* at Gerasa. In that case, assuming a podium height of 1.50m the overall height of the cavea would have been 20.08m. In addition the height of the balustrade would add a further 1.20 metres. In terms of the overall reconstruction of the theatre there is very little difference in overall height between this method and the two *maeniana* design where the overall height is 20.42 metres.

Orchestra and proscaenium wall

The orchestra, 19.91 metres in diameter, is paved with stone. The *proscaenium* wall is 1.51 metres high at the west end, 1.56 metres high at the east, and because of the slope of the orchestra it is 1.61 metres high in the middle. It is divided by five broad pilasters, 87 cm wide × 16 cm deep, into four sections in each of which is a small pedimented niche and a pair of round-headed ones. Continuous base and cornice mouldings run along the whole stage front following the projections of the pilasters. At each end of the stage is a staircase rising away from the centre of the orchestra. The staircases have treads, 60 cm wide and mainly 32.5 cm deep with risers mainly 22.5 cm high. There are six risers.¹⁷ The stage is 6.32 metres wide to the podia which support the *columnatio* and 8.36 metres to the back wall.

The doorways in the scaenae frons

The rectilinear *scaenae frons* wall is pierced by three doorways, 1.82-1.86 metres wide, flanked by square pilasters 49-50 cm wide (Fig. 1). The pilasters have 3-sided square capitals, 69 cm high and about 51 cm wide at the base. The capitals have two acanthus leaves on each face and 7 vertical channels, which are also a feature of the friezes of the *columnatio*. They support an entablature with a 3-stepped architrave, 60 cm high, and a frieze, 37 cm high, decorated with vertical channels capped with an egg-and-dart carved from the same block. The cornice, 23 cm high, has a row of small square dentils at the bottom, an egg-and-dart, modillions and coffered panels with flowers and an egg-and-dart framing them. On the corona is the vertical channel motif with a bead-and-reel above. The raking cornice of

¹⁷ These staircases have no outer wall to hide them and are totally modern. I am suspicious of them. Also note that a large amount of the *proscaenium* wall is modern restoration.

the pediment is similar but with a cyma recta sima with palmettes. In the tympanum is a disc.

The niches in the scaenae frons

Flanking each doorway is a round-headed niche framed by a pedimented aedicule supported on two columns. There are four niches on the lower storey and the architectural fragments behind the theatre suggest that there were corresponding niches in the storey above (Fig. 6). The shell block from the head of the niche, which includes the hood moulding, is 1.30 metres wide × 65 cm high. The hood moulding is 22.50 cm wide including the cyma recta moulding at the top. There is also a horizontal cyma recta moulding at the bottom of the head of the niche which runs round across the top of the 'pilaster' at the side of the drum, which is also 22.50 cm wide. There are flat pilasters at the sides of the niche, 61 cm wide, each with a capital consisting of an ovolo and a big cyma recta. In front of each niche is a pair of columns each on a square podium. The bases are 25-26 cm high; the shafts are 2.66-2.75 metres high and taper from 40 cm to 37 cm. The architrave has two fascias and is capped by a cyma reversa. The frieze has vertical channels or flutings and is carved out of the same block as the architrave. Together they are 60 cm high. Above the architrave/frieze block is an egg-and-dart, which is carved out of the same block as the pediment which has a running acanthus scroll with flame palmettes at the corners. The height of the pediment to the apex is 50-57 cm.

Two types of shell niche have been found behind the theatre and it is likely that they came from the upper order. There are enough fragments for 4 niches of the larger type. The shell heads are 1.03-1.20 metres wide and the hood moulding which runs around the top of them is c.20 cm wide. These probably corresponded to the shell niches of the lower order. The smaller type is 89 cm wide and has pilasters at the sides carved from the same block and 15 cm wide. They probably came from above the three doorways of the *scaenae frons* and there may have been one over each doorway into the *versurae*.

The podia and columns of the columnatio: Lower order

The *columnatio* originally had two-storeys with a sloping roof extending over the area of the stage (Fig. 12). There were 26 columns on each storey, including the ones flanking the doorways at each end of the stage, as well as the 8 smaller columns flanking the niches — a total of 68 columns for

the whole *scaenae frons*. The columns on the west side of the *scaenae frons* are 5.23 metres high, including base and capital; those on the east side are 5.31 metres high. The columns rest on four podia, 1.89-1.96 metres high \times 2.04 metres deep, and are arranged four to a podium (Fig. 2). The central pair of columns is more widely spaced than the outer pair and each podium is cut back in the middle. The edges of the podia nearest to the doorways and the corresponding entablatures curve round to enclose the doorways giving the impression of a niche, even though the *scaenae frons* wall is in fact rectilinear. Pairs of columns at the ends of the podia nearest to the doorways, slotted into semicircular recesses in the *scaenae frons* wall, serve to emphasise this illusion. The column bases (including plinth) are mostly 82 cm wide \times 32 cm high, but the height can vary between 31-41 cm. The lower diameter of the columns is 62 cm, including anathyrosis; without 57 cm. The shafts vary between 4.06-4.32 metres high (there is a complete column shaft in the *postscaenium*, which is 4.24 metres high). The capitals vary in height between 66-77 cm high.¹⁸ The slotted columns have round bases, 36-41 cm high, and shafts 4.04-4.26 metres high.

The entablature. Lower order

The architrave of the lower order projects 1.14 metres from the wall face at the west end. One end of the projecting block, 1.80 metres long, is engaged into the wall, while the other end rests upon a column. The rear 92 cm of the block, engaged into the wall, is uncarved, while the projecting 88 cm is carved. At the front it is joined to another block 2.24 metres wide \times 26 cm wide at the bottom, which rests upon a pair of columns and is carved on three sides. The width of the soffit is 50 cm. The overall height of the architrave in situ is 57 cm, but fragments found behind the theatre range from 53-61 cm high. The frieze fragments behind the theatre range from 34-40 cm (Fig. 4). The cornices are 53-60 cm high, with dentils about 6.5 cm square, and an undecorated ovolo above (Fig. 5). The modillions have acanthus scrolls on their undersides and are 12-13 cm wide \times 12-13 cm deep \times 6 cm high at the back. They are 19 cm apart, and in between is a coffer with a flower in the middle. Around coffer and modillion runs a rough ovolo unadorned. On the corona are vertical channels, 6 cm high with a bead-and-reel above. The sima is a cyma recta, 18 cm high, decorated with alternately flame and upright palmettes. There are two fragments in the east *aditus*. One is from a corner and measures 63 \times 78 cm on the underside

¹⁸ In some cases the wrong capital has been restored. For example the column on the south side of the door at the east end of the stage is about 18 cm too low.

(without the dentils) and the other is from an inner angle of one of the curved niches. It has a curved section 57 cm long; a projection of 28 cm and a straight section 44 cm long. Its decorative detail is like the first fragment.

A reconstruction of the scaenae frons

	Lower order	Upper order
Podium	1.89-1.96	? 0.90
Base	0.31-0.41	0.22-0.29
Shaft	4.06-4.32	3.72
Capital	0.56-0.77	0.48-0.51
Architrave	0.53-0.61	0.43-0.51
Frieze	0.34-0.40	0.27-0.33
Cornice	0.53-0.60	0.40-0.49

Two short sections of lower order architrave survive above the columns at the east and west ends of the scene. The heights from the stage floor to the top of the architrave block at these points are 7.70m and 7.85m respectively. Taking the average as 7.78m and adding an average of 37 cm for the frieze and 56 cm for the cornice gives a total height of the lower order from stage level to the top of the cornice of 8.71 metres (Figs 12-4).

The upper order probably had podia about 90 cm high,¹⁹ columns 4.47 metres high, architrave, 47 cm high, frieze 30 cm high, cornice 44 cm high — a total height of 6.58 metres. The overall height of the *scaenae frons* must therefore have been about 15.29 metres. Including the stage, at 1.54 metres, the overall height measured from the bottom of the podium running around the orchestra in front of the *proscaenium* wall was 16.83 metres. If we assume a stage roof sloping at 22.5° and about 80 cm thick, the overall height of the stage building to the apex of the roof would have come to almost exactly the same height as the balustrade around the top of the cavea. This is what Vitruvius prescribes²⁰ and what can be seen in a number of well-preserved Roman theatres of the 2nd century AD such as those at Aspendos and Bosra.²¹

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¹⁹ Vitruvius prescribes that the height of the upper podia should be half that of the lower (*De Arch.* 5.6.6).

²⁰ Vitruvius *De Arch.* 5.6.4.

²¹ For Aspendos see De Bernardi Ferrero 1970, pp.161-174; for Bosra, see Finsen 1972.

The survey

The techniques used in the survey were developed on previous campaigns involving a number of Roman theatres in Italy. The survey techniques were developed to provide quick and accurate measurements of all aspects of the theatre while remaining simple and robust enough to allow those without previous experience to participate. The methods combined traditional measured drawing techniques with geometry and triangulation. The use of the theodolite to provide digital read-outs of sighted angles and the introduction of computer aided drawing in the field meant that the margin for error normally encountered in triangulation and manual drafting could be significantly reduced. This technique accurately accommodated the large-scale circular features of the theatre and allowed for the team to check measurements against drawn plans while still on site.

The survey of the fragments of the scene building

About 4,000 architectural fragments were taken out of the theatre and laid out on the ground behind the *postscaenium* after the restoration of the *scaenae frons* in 1953-6. Some attempt had been made to group the fragments by type, but it was by no means systematic (Fig. 7). As our aim was to study the fragments it was important that we should be able to locate any particular fragment quickly and accurately. The method adopted was to establish the location a number of selected fragments relative to the external wall of the theatre. These selected fragments were designated with a chalk or painted number that would provide the basis for locating them both on the overall plan and in the field. The theatre dimensions were known from the survey made by the team in 1996 and through the use of triangulation it was possible to relate the selected fragments to the plan of the theatre with great precision. The fragments chosen were evenly distributed throughout the survey area and were generally no more than four metres apart. They were plotted onto a plan using computer drawing techniques that allowed for a high degree of accuracy, and then the rest of the fragments were added to the plan by field survey. The resulting plan showed every piece and provided sufficient information to locate each fragment both on the plan and in the field as required. The fragments were catalogued in accordance with their type: base, shaft, capital, architrave, frieze, cornice, pediment, niche etc. Each piece was given a number within its category (for example F17 for a frieze piece) and this was also marked on the

plan. These designations were entered into a spreadsheet that allowed the fragments to be sorted according to size and type.

The Computer Reconstruction of the Theatre

The use of computers to create three dimensional visualisations of buildings has been a feature of mainstream architecture since the early 1990s. In recent years archaeologists have become aware of the potential of this medium for testing hypothetical reconstructions.²² The benefit of having the measured data for the South Theatre in digitised format was that it was a relatively straightforward process to convert it into a computer model.

The Computer Reconstruction of the Scaenae Frons

The catalogue of the fragments from the *scaenae frons* was also digitised to produce a series of three-dimensional models corresponding to the range of individual components (Figs 10-11).²³ These digital components could be brought together as in a jig saw puzzle to form the reconstruction of the *scaenae frons*. The fragments, although placed within various categories of generic type (cornice) and sub-type (lower order, curved etc.) were by no means standard in terms of their dimensions. This variation was sometimes as great as 25%. Thus in order to arrive as a regular horizontal cornice line an average had to be taken of a range of column shafts and entablature elements. The numerous changes in direction of the line of the entablature seems to have required a degree of quality control beyond the ability of the masons.

The range of dimensions of like fragments made the task of determining the overall height of the scene building difficult as the highest extant remains on the *scaenae frons* are two short sections of lower order architrave at the east and west ends of the scene. The heights of these sections from the stage floor are 7.70m and 7.85m respectively. The accumulative difference between the lower and upper end of the range of dimensions of the fragments between the lower podium and the cornice line of the upper order could as much as 1.09 cm based on the record of the surviving fragments. The computer model of the reconstruction used the heights of extant lower order architraves and a reasonable median for the remaining

²² Renfrew 1997.

²³ The software used to create the three dimensional models were 3D Studio Max and FormZ. The reconstruction of the main body of the theatre also used AutoCAD 2000.

elements to propose a structure that located the top of the upper order pediment (Figs 12-14).

An animated walk-through of the theatre was also created. It is in colour and shows the theatre with both storeys of the *scaenae frons* reconstructed as well as the roof over it. Because it is a movie the renderings in this model are less detailed than in the other reconstructions. Two sample views show the *scaenae frons* taken from two different angles (Figs 8-9).

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Fig. 1. General view of the stage.



Fig. 2. View of the *scaenae frons* taken from the stage.



Fig. 3. Seating of the cavea showing the east tribunal and part of the stage.



Fig. 4. Frieze fragment from the *scaenae frons*,
now in the deposit behind the theatre.



Fig. 5. Cornice fragment from the lower order of the *scaenae frons*,
now in the east *aditus maximus* of the theatre.

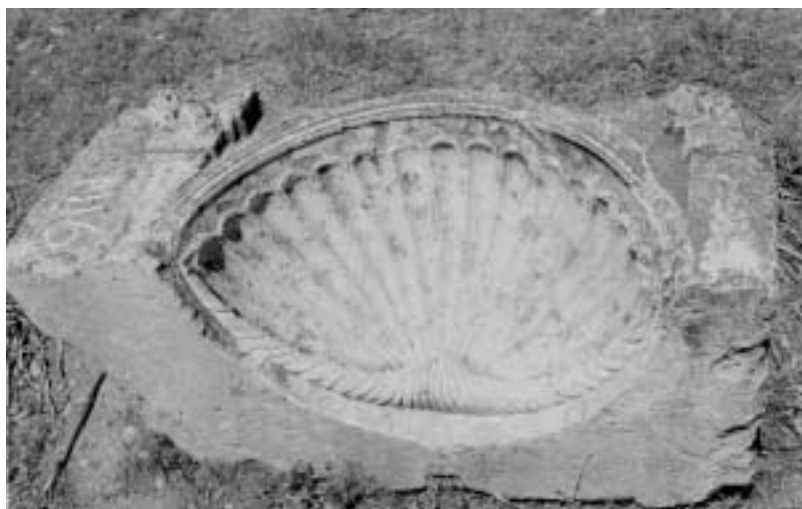


Fig. 6. Shell niche head from the upper order of the *scaenae frons*, now in the deposit behind the theatre.



Fig. 7. General view of the fragments deposited behind the theatre.

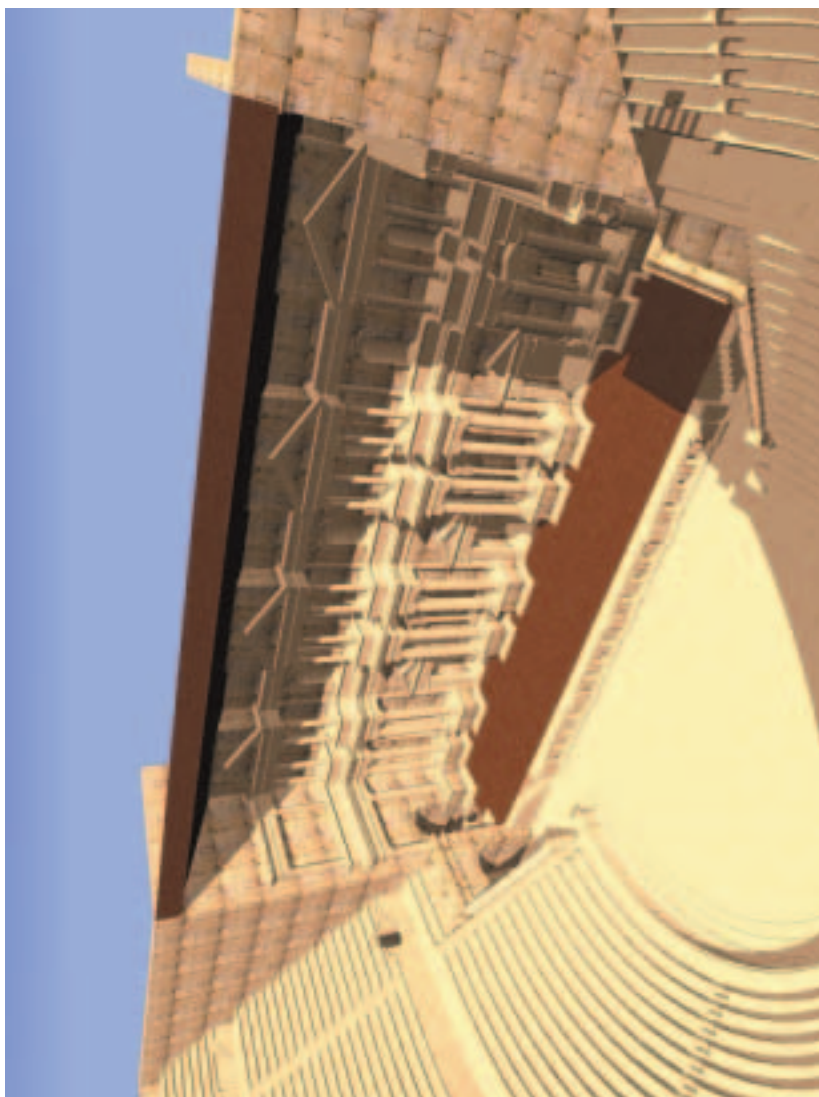


Fig. 8. Reconstructed view showing the *scaenae frons* with roof over the stage. This computer image is rendered to represent the stone used. It is part of a series used for a computer animation that allows the viewer to move through the virtual theatre.

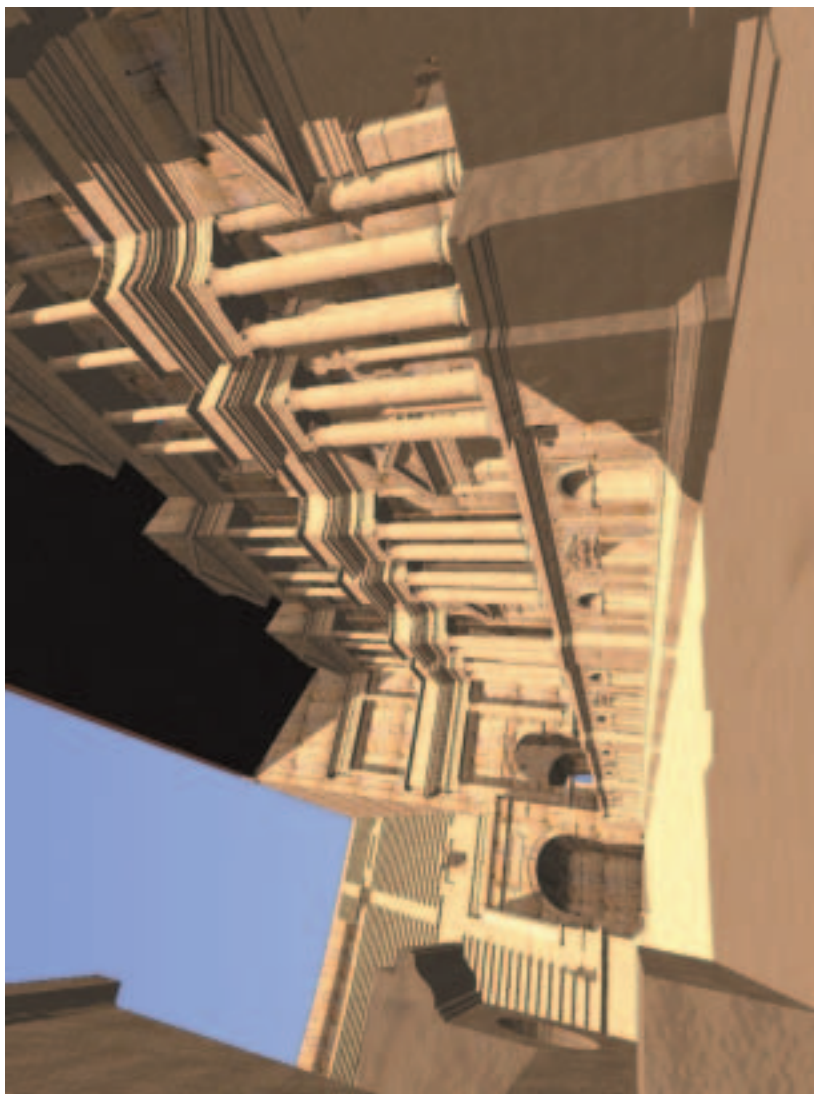


Fig. 9. Another view in the same series, from the orchestra looking up towards the *scaenae frons*.

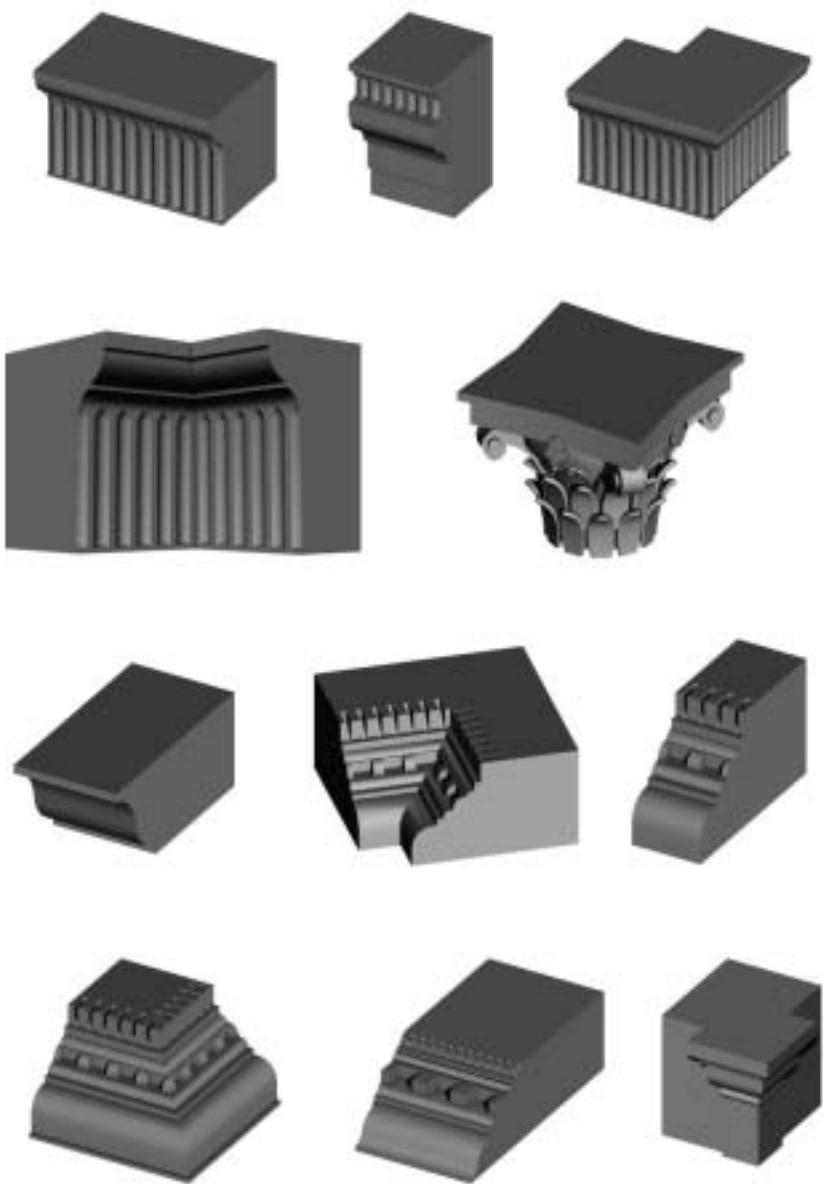


Fig. 10. Sample of the modelled fragments used in the computer reconstruction.

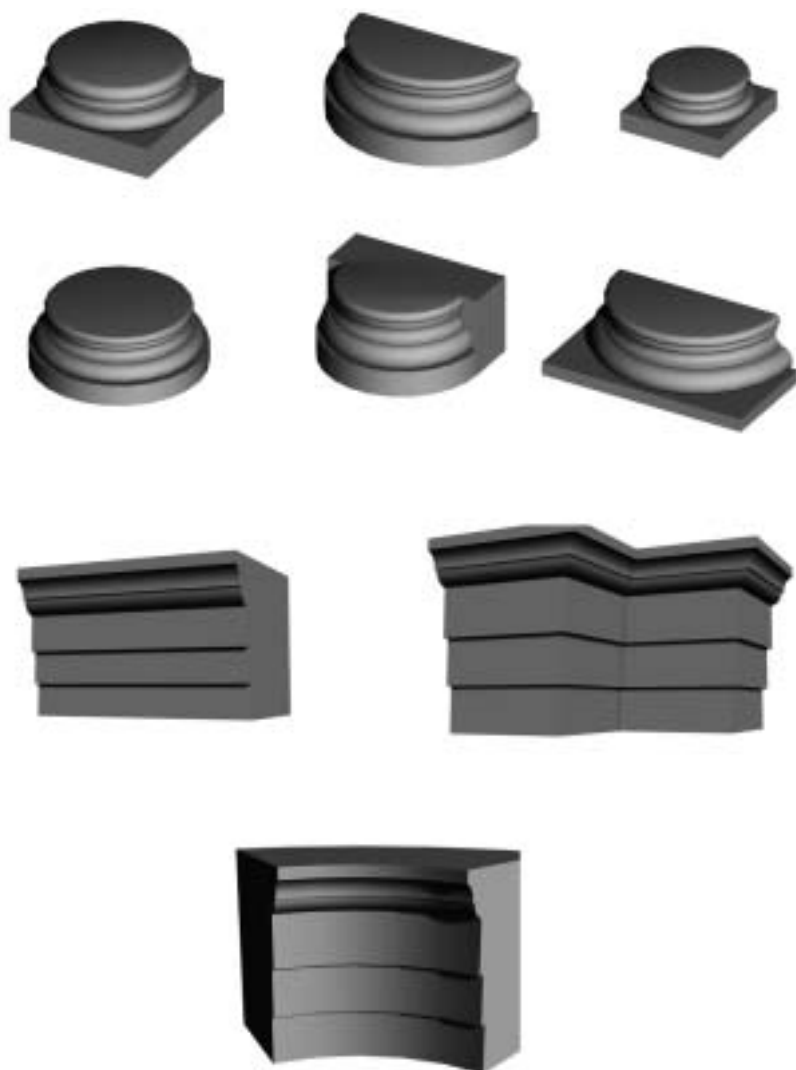


Fig. 11. Sample of the modelled fragments used in the computer reconstruction.



Fig. 12. Reconstructed elevation of the *scaenae frons*.

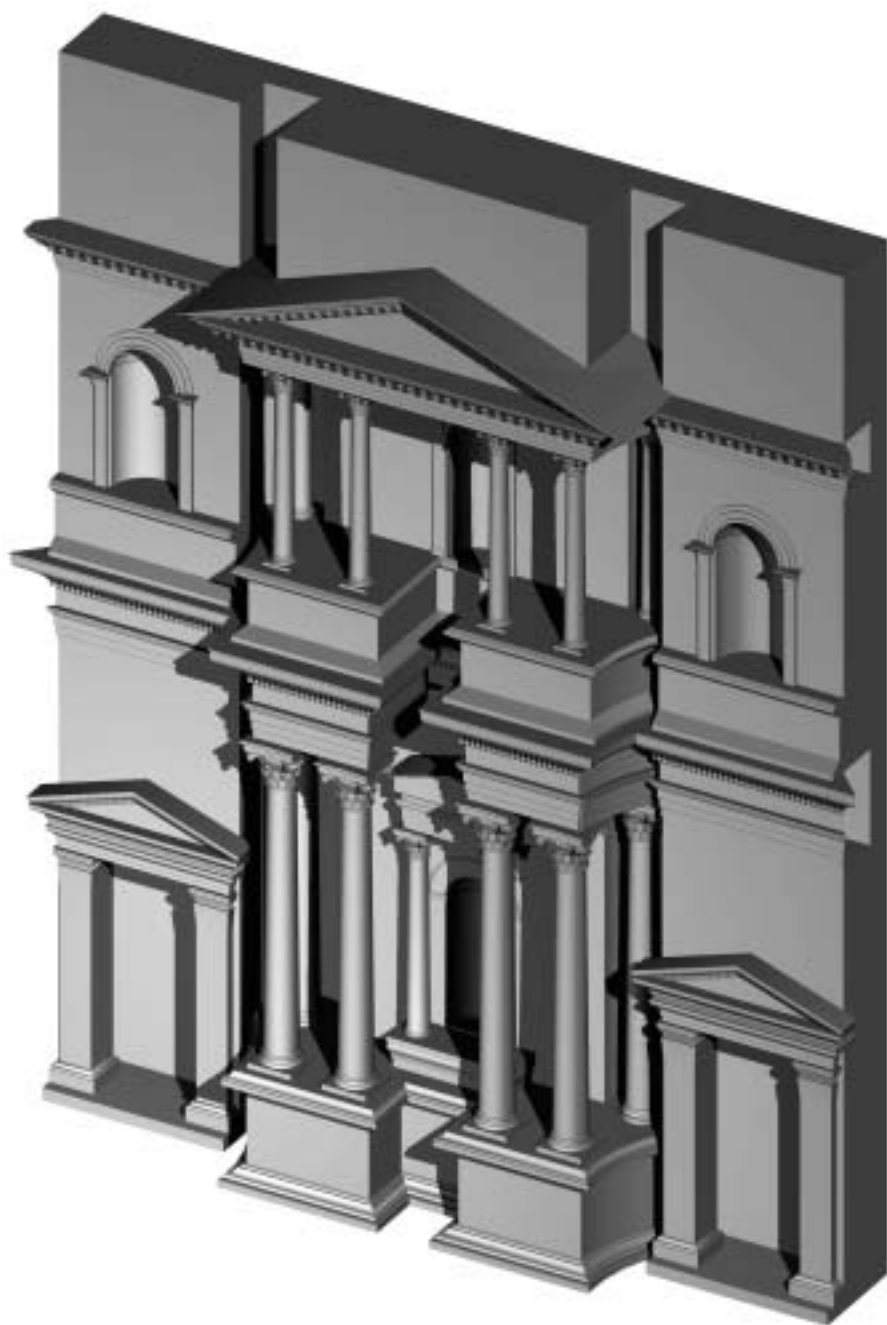


Fig. 13. Isometric reconstruction of the *scaenae frons*.



Fig. 14. Detail of the reconstruction of the lower order of the *scaenae frons*.

Defining Phoenician Religious Space: Oumm el-‘Amed Reconsidered

Nicholas C. VELLA

Department of Classics and Archaeology
University of Malta
Msida MSD 06
MALTA
Fax: 356 330 431
E-mail: nvel2@um.edu.mt

Abstract

Phoenician religious sites have often been cited in discussions about religious beliefs and practices. However, no attempts have been made to reveal systematically the bases and criteria on which scholars have defended the sacred nature of these sites, so that Phoenician temples remain as elusive as ever. This paper looks in detail at one site in Lebanon, Qumm el-‘Amed, where it is claimed that two large temple complexes existed in the Hellenistic period. An attempt is made to understand why major monuments at the site are religious in nature, following a few principles that are set out clearly..*

When Mortimer Wheeler assessed the Hellenic contribution to Roman art and architecture in his standard introduction to the subject published in 1964 he had no qualms in asserting that on the Acropolis of Athens in the

* This study is based on the author's Ph.D. thesis, supervised by Professor Richard Harrison of the University of Bristol. The author is grateful to the University of Bristol for awarding him a Post-Graduate Scholarship, and to the Committee of Vice-Chancellors and Principals of the Universities of the United Kingdom for having given him the Overseas Research Scholarship Award. A small grant from the Department of Classics & Archaeology, University of Malta, facilitated access to Dunand and Duru's (1962) report on Oumm el-‘Amed. The author would also like to thank Mr Michael Howarth of the Arts and Social Sciences Library, University of Bristol, who helped him retrace details of the painting "Ernest Renan à l'Acropole d'Athènes" (1902) by André Brouillet. Finally, the author is also grateful to an anonymous reviewer and to the Editor, whose comments guided the final version of this article; of course, the author is responsible for all remaining errors of fact and interpretation. This article is dedicated to the memory of Professor Giovanni Tore, teacher and friend.

latter half of the fifth century BC the Greeks had 'said practically all that they had to say about architecture'.¹ It is unlikely that years earlier, the great French Semitist Ernest Renan who stopped at Athens on his way east, would have said as much so crisply and so bluntly. His portrait by the artist André Brouillet, now at the Sorbonne,² depicts him in deep thought sitting opposite the ruins of the temple to Athena Parthenos, as if he was wondering what Phoenician equivalents lay in store for him in Lebanon where he was to head a scientific mission for Napoleon III.³ His published results make it clear that a systematic and comfortable definition of a Phoenician temple, as one had for the Greek, could not be had on the basis of the material remains uncovered then, notably at Byblos and Amrith. These limitations prevailed with remarkable consistency for many years and when the two Frenchmen Georges Perrot and Charles Chipiez published their monumental history of art of Phoenicia in 1885, Malta's megalithic monuments featured as renowned examples of Phoenician religious architecture.⁴ To these they added open-air religious worship at the "high places" of the Bible, 'a creed of Canaanite fetishism' as the Frenchmen called it.⁵ The Phoenicians prayed and sacrificed on 'every high hill and under every green tree'; and for that no man-made temples were needed but torrents, forests, mountains, clouds and sky. There is nothing surprising here: the exalting of the natural was a legacy of the Romantic Movement, with its emphasis on the beauty and sublimity of wild nature. To the nineteenth-century antiquarian this was simply the closest one could get to the emotions stirred by the elegant temples of the Aegean and Greek Sicily.

Few advances were made on the nature of Phoenician religious architecture following the publications of Renan and Perrot and Chipiez, and one can easily claim that for decades scholars interested in the field of Phoenician material culture in the homeland were essentially living off the work that these scholars put together. While the Maltese monuments were slowly recognized to pre-date the arrival of Semitic colonists on the islands by more than a millennium and a half,⁶ Solomon's temple and the Canaanite "high places" continued to serve as lynch pins in discussions of Phoenician religious sites,⁷ when in reality neither one nor the other have yet yielded to archaeological evidence. The result has been a huge cacophony of confused

¹ Wheeler 1964, p. 11

² Tournikiotis 1994, p. 344

³ Renan 1864

⁴ Perrot and Chipiez 1885, pp. 301-218

⁵ *Ibid.*, p. 251

⁶ Renfrew 1973, pp. 162-166

⁷ Moscati 1968, pp. 72-73; Harden 1980, pp. 83, 85; Fantar 1986, pp. 209-213.

writing characterized by a general implicit consensus on what constitutes the sacred in material culture. Take, for example, the discovery of an alleged Phoenician tri-baetyled altar at Motya in Sicily: the excavator quickly identified a block of stone with three perforations as a religious installation without stating clearly *why* this should be so.⁸ While some are baffled by this ‘curious structure’,⁹ the initial interpretation remains unchallenged and the alleged altar continues to serve as evidence for the occurrence in Sicily of the “baetylic triad” which presumably originated in the Phoenician homeland.¹⁰ A visit to the site and a close study of the block and the installations that surround it make it immediately apparent that the structure is in fact a weight used to apply pressure on a long wooden lever employed in the production of olive-oil, most probably during the Roman re-occupation of the island.

I have discussed this site and its problems at length elsewhere and I mention them here to drive home the point that the literature about Phoenician religious sites is fraught with similar *non sequiturs*.¹¹ No attempt has been made to develop an approach that states explicitly what the framework of inference is: buildings continue to be thought of as “shrines” or “sanctuaries” because they contain sacred objects which were found in other sites assumed *a priori* to be “shrines” or “sanctuaries”. Labels given at the time of discovery find a prominent place in the literature and scholars remain interested in the conclusions reached. Indeed, in a monograph published recently,¹² the author purports to study the Oriental origins of Phoenician and Punic temples in Sardinia: the attempt is commendable, and I readily espouse some of the conclusions reached in the text, but the outcome is unfortunately marred by the simple fact that the author takes the known sites as givens, and nowhere does she state *clearly* the basis for her selection or *question* the criteria adopted to define the religious nature of the objects or the places when these were discovered. To shed the discipline of the circularity that has afflicted the arguments of past studies it would have been necessary to make an explicit case for each site taken in isolation, stating the assumptions so that the reader can support or refute the interpretative exercise. I have taken this stand elsewhere with the intent of hacking a clear path through a mass of confused writing,¹³ following the work of one pre-historian who has cautioned that locations set aside for religious ritual must

⁸ Tusa 1970, pl. 10

⁹ Shaw 1989, p. 171

¹⁰ Bisi 1991, pp. 229, 233, pl. 66b

¹¹ Vella 1998, pp. 178-180, figs 67-71, 73

¹² Perra 1998

¹³ Vella 1998

be carefully identified.¹⁴ To guide my investigations, however, I did not propose a general theory of religious ritual that can transcend context and analyst, and to which data can be readily “applied” as some archaeologists would have us believe. Indeed, I brought into question the degree to which such a method exists in archaeological thought, showing that despite what has been written in recent years there is no hard and fast rule to recognize ritual from the archaeological evidence.¹⁵ I showed that the identification of a religious site or building depends on a logical process wherein there is a double movement from data to interpretation and back again, where an argument is cumulative. The principle that I followed was situational and contextual, and patterns sought in evidence for which the context of deposition and its formation had been duly assessed, classified by type and set in a time frame. The choice of an emphasis on narrative¹⁶ allowed me to contextualise my critiques and to present in a clear way the complex and laborious chain of inferences upon which much of the interpretation rested. The results were interesting, if frustrating, conditioned by the relatively poor quality of publications: of 48 sites examined only 13 provided sufficient evidence for a good case to be made about their religious nature when these were taken in isolation, and for 11 of them this was mainly based on the inscriptional data collected.¹⁷ I concluded that to a definition of a Phoenician temple, qualifiers of time and space have to be added because changing political situations in Phoenicia throughout the course of the first millennium BC, and unforeseen and diverse experiences abroad, elicited different responses from Phoenician society as to how it went about organizing its religious space and territory.¹⁸ In this paper I intend to demonstrate how this process of identifying a site with a religious monument works in practice by concentrating on a case study from Lebanon. I will also show that small chapels in large temple complexes, surmised from terracotta or stone models and funerary stelae, existed in the Phoenician

¹⁴ Renfrew 1985

¹⁵ Cf. Hodder 1992, pp. 152, 213 *contra* Renfrew 1985

¹⁶ Hodder 1989

¹⁷ Vella 1998, chapter 3. These are: Temple of Eshmun at Bostan esh-Sheikh, Oumm el-'Amed, Sarepta, Wasta (Lebanon); Kition-Kathari, Meniko-Litharkes (Cyprus); Tas-Silg (Malta); Pyrgi (Italy); Grotta Regina (Sicily); Antas, Temple of Bes at Bithia, Temple of the Mastio at Monte Sirai (Sardinia); Cueva de Es Cuieram in Ibiza (Spain). When the rest of the sites were considered together in chapter 4, rather than in isolation, an explicit case was made to defend the religious nature of another 12 sites. These include: Ain el-Hayât, and the Ma'abed at Amrith, Kharayeb (Lebanon); Kition-Bamboula (Cyprus); Kommos (Crete); Ma'abed in Nora, Grotta del Papa on Tavolara, Strumpu Bagoi at Narcao (Sardinia); Gorham's Cave (Gibraltar); Carton Chapel, Sidi-bou-Saïd, Ras ed-Drek (Tunisia).

¹⁸ *Ibid.*, chapters 4, 5

homeland. The narrative that follows is divided into two: the descriptive part gives a summary of what is known about the site and presents the criteria by which the excavators claimed that the remains at Oumm el-'Amed were of a religious nature; in the discursive part I highlight the problems of interpretation and proceed to identify the religious nature of single aspects of the site within rigorous parameters of definition.

Oumm el-'Amed: Description of the site

Nineteen kilometres south of Tyre in Lebanon is the site of Oumm el-'Amed (**Fig. 1**). Situated on a rocky plain that dominates the sea between the rugged promontories of Ras el-Abiad to the north and Ras en-Naqoura to the south, the site covers an area of about 18 ha. on sloping ground by the wadi Hamoul (**Fig. 2**). The site has been known for a long time and was visited by a number of travellers since the eighteenth century. Count Melchior de Vogüé explored the ruins in 1853, noting the remains of a temple. Ernest Renan was there in 1861 but abandoned the excavations he undertook when he noted that the site was of Hellenistic date.¹⁹ Excavations were again conducted in 1921 by Eustache de Lorey from the Institut Français d'Archéologie et d'Art Musulman at Damascus, uncovering more of the temple but providing only a photographic record of the work undertaken. The most significant series of excavation campaigns were carried out by the Frenchmen Maurice Dunand and Raymond Duru between 1943 and 1945 with the help of the Direction du Service des Antiquités de la République Libanaise. A detailed account of their activities at Oumm el-'Amed, accompanied by illustrations and vivid reconstruction drawings, was published in two volumes in 1962.²⁰ Their monographs also included an invaluable catalogue of the material that ended up in the Louvre after Renan's campaigns. The excavators concluded that Oumm el-'Amed was occupied after the Persian period. Two large temples were built in the third century BC, surrounded by numerous buildings of a domestic and industrial nature. Rock-cut tombs were also discovered in the nearby hillsides. The manufacture of olive-oil seems to have been an important specialisation at the site as attested by the large number of olive presses uncovered. The Frenchmen suggested that the site was a rural religious centre dependant on Tyre with its farms, dwellings and other accommodation for people in transit along the coastal plain of Phoenicia. After abandonment before the

¹⁹ Renan 1864, pp. 695-749

²⁰ Dunand and Duru 1962

Roman occupation of the Levant in 64 BC, the site was occupied again in Byzantine times when a hamlet and a small church were built around the ruins of one of the temples.

Two temple complexes were identified by Dunand and Duru at the site: the Temple of Milk'ashtart and the Eastern Temple with its Throne Chapel (Fig. 3).

The temple of Milk'ashtart

The Temple of Milk'ashtart is situated on the south-west extremities of the town, dominating the coastal plain.²¹ It consists of a temple surrounded by a series of buildings thereby cutting it off from the rest of the site; the back wall of these buildings formed the sacred enclosure of the temple complex. This layout, according to Dunand and Duru is typical of Semitic temples.²² The buildings around the courtyard included a large hypostyle hall to the north, dwellings and magazines to the south and a portico to the east. Entrance to the complex was through a monumental doorway to the south-east and a secondary doorway in the north portico. The complex covers a trapezoidal area of 56 m. (north — south) by 61 m. (east — west). Its western extremity was built on an artificial fill, 5m. high, to level out the westwards slope in the terrain.²³ The foundation of the temple *cella* which measures 24 m. by 8.50 m. and is oriented west-east, was built of massive blocks built on bedrock and pointed with a chalky mortar.²⁴ The courtyard floor was composed of rectangular stone slabs. The solid podium of the *cella* rises to a height of 1.20 m. above the floor of the yard.²⁵ Nothing survived of what had originally been built on the podium, but staircases at the east and north-east end of the podium were assumed from the traces uncovered.²⁶ A statue showing a lion or a sphinx recovered from the immediate vicinity suggested to the excavators that a pair flanked the eastern monumental staircase.²⁷ Dunand and Duru suggested that the eastern end of the temple included four columns, which in fact they reconstruct, but noted that no such architectural remains could be found. They also noted that it was not possible to reconstruct the internal divisions of the *cella* in Classical

²¹ *Ibid.*, pp. 21-56, pls 3-45, 89-99

²² *Ibid.*, p. 27

²³ *Ibid.*, pl. 93.E

²⁴ *Ibid.*, pl. 93.D

²⁵ *Ibid.*, pl. 8

²⁶ *Ibid.*, pl. 7

²⁷ *Ibid.*, pls 34.3, 91

Greek fashion (*pronaos, cella, adyton*). Opposite the facade of the *cella* and beyond the presumed staircase, there was a rectangular construction in sandstone blocks which the excavators identified with a monumental altar; no basin that would contain water for sacred ablutions was identified.²⁸

The Eastern Temple and The Throne Chapel

The Eastern Temple is situated 160 m. to the west of the other temple, at a height above sea level ranging between 53-59 m. (Figs 3-4)²⁹ Like the other sanctuary, the complex consists of a series of buildings and porticos constructed around a rectangular courtyard measuring 35 by 22 m. overall; the temple is built inside at the west end.³⁰ Entrance is through three doorways.³¹ The lintel of the eastern entrance has been found.³² It measures 4.40 m. overall and depicts a winged sun-disc flanked by *uraei* in relief (Fig. 5a); at each corner is a figure draped in a long tunic and wearing a pointed headdress, brandishing a sceptre with a curved end to which is attached a ram's head crowned with a disc set in a crescent, a representation of the horns of the Egyptian cow-goddess Hathor.³³ The whole complex describes a large rectangle, oriented east-west and measuring about 60 by 35 m. The *cella* of the temple consists of a rectangular podium built of large, roughly regular blocks. It is about half a metre high, and measures 14.50 by 7.80 m. Unlike the rest of the complex, the podium is oriented west-south-west—east-north-east, an exception which the excavators suggest was dictated by the configuration of the terrain.³⁴ Entrance to the *cella* was through a monumental doorway at the east end reached by a flight of steps: the threshold slab was found with an opening measuring 1.96 m., together with fragments of the pillars that framed the door. A lateral door existed at the north-east corner of the *cella* giving access to the main entrance kept bolted from the inside. The lintel, measuring 2.92 m. in length and decorated with a disc flanked by *uraei* in relief, was recovered too.³⁵ The *cella* is divided into three areas: Hall 1 measuring 8.80 by 5.60 m. which includes a slab flooring; a wall divides the west end into two rooms (2, 3) measuring 3 by 2 m. and 3 by 3 m. respectively. The excavators noted that nothing was found to

²⁸ *Ibid.*, p. 28

²⁹ *Ibid.*, pp. 56-80, pls 46-70, 100-107

³⁰ *Ibid.*, pp. 65-69, 62-64, pl. 103

³¹ *Ibid.*, pp. 69-75

³² *Ibid.*, fig. 16, pls 62.3, 63.2

³³ *Ibid.*, pp. 71, 170-171, 171 n. 1, fig. 70, pls 64, 104-107; cf. pl. 76

³⁴ *Ibid.*, pp. 79-80

³⁵ *Ibid.*, fig. 13

suggest that the facade of the temple included a porch with four columns and a pediment,³⁶ although a reconstruction drawing by Duru includes the columns (Fig. 4). In the north-west corner of the complex, adjacent to the *cella*, is a space or room (11) interpreted by the excavators as 'certainement une chapelle'.³⁷ It is an L-shaped room but seems to have been originally rectangular with the west and north walls of rooms 9 and 10 having been added later (Fig. 3). Entrance is through a monumental doorway at the north end of the east wall, 1.10 m. wide, framed by pillars and surmounted by a 2.22 m. wide lintel.³⁸ The lintel is decorated by a disc flanked by *uraei* and wings. Beneath the first disc is an inverted crescent over a smaller disc. Opposite the door, in the north-west corner of the room a rectangular podium was uncovered, measuring 1.20 m. high. It is constructed as an external frame of masonry filled with rubble and earth. A flight of five steps on the south side allowed access to the podium. In the space between the podium and the north wall of the room, fragments of a stone sphinx throne were found.³⁹ Dunand and Duru suggested that the throne was placed above the podium. A slab or lintel was found lying above the podium. The Frenchmen considered it to be too long (2.60 m.) and too heavy to have crowned a *naos* or baldacchino above the podium.⁴⁰ Against the south wall of the room, a plinth composed of two neatly cut slabs (measuring 1.13 m square) was found. Dunand and Duru suggested that a cult object, altar, statue or also a throne would have been placed above the plinth. They, in fact, suggest that the lintel mentioned above could have crowned a niche over these two slabs. Nine of twelve terracotta figurines recovered from the Eastern Temple came from the Throne Chapel.⁴¹ They are of the type known from the site of Kharayeb to the north of Tyre, and according to the excavators they played a part in a cult to Astarte inside the chapel.⁴²

Oumm el-'Amed: Discussing the site

The monumental report dedicated to Oumm el-'Amed is by far one of the most detailed accounts of an excavation in the Phoenician heartland. The site is well known in the general literature, with entries in all the

³⁶ *Ibid.*, p. 59

³⁷ *Ibid.*, pp. 67-69, pls 51, 53, 101

³⁸ E.6: *ibid.*, fig. 15, pl. 63.1

³⁹ E.34, E.35: *ibid.*, pp. 168-169, pl. 67

⁴⁰ *Ibid.*, p. 68

⁴¹ *Ibid.*, p. 219

⁴² *Ibid.*, p. 236

recently published research aids on Phoenician history, and the reconstructions of the temples have served as benchmarks for the study of other sites. For instance, G. Colonna has considered the temples at Oumm el-'Amed in his study of the architectural terminology adopted on the inscribed gold sheets recovered from the Etruscan temple complex at Pyrgi in Italy.⁴³ A. Ciasca too has referred to Oumm el-'Amed when discussing the layout of the Phoenician sanctuary at Tas-Silg in Malta, pointing out the similarities between both sites.⁴⁴ Indeed, to argue whether the structures at Oumm el-'Amed are religious buildings or not might appear superfluous given the consensus in the literature: the published reconstructions of both complexes evoke visual images of Phoenician temples to which scholars are hardly accustomed, leading, however, to erroneous statements; only Lipiński expresses concern in passing while noting the archaeological reality.⁴⁵ In presenting a case, therefore, to justify seeing religious complexes at Oumm el-'Amed those same reconstructions have to be taken apart, and the report by Dunand and Duru dissected to tease out information that might satisfy the parameters against which the ritual nature of the site is assessed.

Let us first start with a few definitions. The Chambers Dictionary defines ritual as 'an often repeated series of actions'.⁴⁶ Religious ritual (as distinct from secular ritual), involves the carrying out of expressive acts of worship, reverence and obedience to a divine power. Anthropologists contend that to be valid ritual must be performed *repeatedly* in *certain prescribed ways*; indeed, as Roy Rappaport put it, performance and formality are intrinsic to the notion of ritual.⁴⁷ For the archaeologist the upshot of this is twofold: first, if repetition is central to ritual action then one expects to find the occurrence of specific elements in the archaeological record over and over again; second, if participation in the ritual involves certain demands on the celebrant involving bodily movements and gestural performances, as Parkin and others contend,⁴⁸ then this should be reflected in the art or iconography, and in the organisation of the space where the ritual is performed. The space being referred to here is existential and architectural: it is lived space, experienced and created, that channels movement through thresholds and along boundaries.⁴⁹ The organisation of this space

⁴³ Colonna 1989-1990, pp. 208-209, figs 7,8

⁴⁴ Ciasca 1993, 1999

⁴⁵ Lipiński 1995, p. 428

⁴⁶ Schwarz 1993, p. 1486

⁴⁷ Lewis 1980; Rappaport 1999: 24, 37.

⁴⁸ Parkin 1992; Rappaport 1999: 50-52.

⁴⁹ Parker Pearson and Richards 1994

is, therefore, dependent on human sight, while the objects perceived inside the space are commensurate with the size of our body.⁵⁰

What sticks out immediately even from a cursory look at the site plan of Oumm el-'Amed is the general similarity in the arrangement of the two complexes: both include a rectangular podium set in a courtyard and surrounded by buildings (Fig. 2). Both complexes have the same general orientation (west-east), and even though the podia are aligned on slightly different axes, we have seen that the construction of one was constrained by the topography. Also, their size and architecture cuts them off from the rest of the site which includes buildings constructed on a much smaller scale, lacking the architectural finesse and detail so apparent in the two complexes. It is clear that these were monuments of importance. The inventory of architectural fragments and sculptures provided by Dunand and Duru,⁵¹ provide a horizontal distribution of these finds, thus allowing us to put them in their proper archaeological context. At Oumm el-'Amed redundancy can be seen in the repetitive use (at least 12 times) of one particular decorative motif: the winged disc flanked by serpents sculpted in relief on doorways (Fig. 5a-c). Placed prominently in the middle of lintels, and in one case (Fig. 5a),⁵² flanked by personages with an upraised arm, it is plausible to suggest that we have here representations which are clearly of some symbolic significance: placed at each entrance to this complex of buildings, disc, crescent, feathered wings, and snakes appear in association over and over again (Fig. 4). The sphinx, half animal and half human, also appears repeatedly in the shape of statues recovered from the site. It also adorns the throne discovered in Room 11 of the Eastern complex, which fell from the podium where it had been placed opposite the doorway. It can be suggested that the actual display of these symbols and fantastic animals in prominent locations be interpreted as a form of deliberate, expressive action; but we still have to demonstrate that these complexes were the locations of expressive actions *serving a supernatural being or divinity*. That such actions actually took place at Oumm el-'Amed can be discerned from the inscriptions recovered: one is the dedication of a statue to Milk'ashtart,⁵³ as is another placed together with its statue of a standing male figure outside the main entrance to the western complex where it was found by the excavators;⁵⁴ another two specifically relate how restoration work was done in honour of

⁵⁰ Tuan 1974, p. 14; 1977, p. 16

⁵¹ Dunand and Duru 1962, pls 91, 101

⁵² *Ibid.*, pl. 62

⁵³ No. 13: *ibid.*, pp. 192-193

⁵⁴ No. 14: *ibid.*, p. 193

the gods Ba'al Shamim and Milk'ashtart respectively.⁵⁵ On the stelae decorated in relief personages are shown carrying incense holders in one hand, while the other is raised in a gesture of adoration.⁵⁶ The religious reading of the scene is corroborated by the inscription on one of the stelae which has been read, albeit with reservations, as 'Ba'alyaton, the priest of Milk'ashtart'.⁵⁷ Taking the site of Oumm el-'Amed in isolation and the evidence presented thus far, a case for identifying the two building compounds with places set aside for religious ritual can certainly be made. I believe, however, that our proposition is greatly strengthened when other data from the Levant are brought into the discussion.

Comparisons between Oumm el-'Amed and other contemporary sites on the Phoenician coast have to be justified on the basis of shared idioms of expression. Hellenistic-period remains at other alleged religious buildings are known at Kharayeb, a site in the Litani valley between Tyre and Sarepta, and at Bostan esh-Sheikh in the hinterland of Sidon. None of these two sites, however, provide analogies for the podia on which the alleged temples of Oumm el-'Amed stood and where, it is worth recalling, the reconstructions in elevation are conjectural. At Kharayeb, the plan of the building is not enlightening because it was not recovered in its entirety,⁵⁸ while at Bostan esh-Sheikh whatever existed on the monumental podium of Persian date was not discovered either.⁵⁹ Moreover, unlike Dunand and Duru,⁶⁰ I fail to see similarities between the foundation remains of the buildings at Oumm el-'Amed and the alleged temples at Byblos older by more than 1500 years. Although I agree with Grainger,⁶¹ and with Corbett before him,⁶² that Oumm el-'Amed displays no Hellenization in so far as language and pottery go, Grainger skirts the issue when he says that 'the buildings show no sign of being other than the traditional Phoenician type, in so far as that existed'. His statement is, of course, not noted because evidence from elsewhere is lacking. If we are really forced to seek antecedents to a religious building set in the middle of a space surrounded by porticos or buildings, then there is no need to look to Syria or Egypt because the Persian-period Ma'abed at Amrith would fall in this category, and the orientation is with the cardinal points too; but then at Oumm el-'Amed water is

⁵⁵ No. 1: *ibid.*, pp. 181-184; No. 2: *ibid.*, 184-185

⁵⁶ *Ibid.*, pls 78.1-2, 79.3, 81.1

⁵⁷ *Ibid.*, pp. 56, 163, 188, pls 79.3, 77

⁵⁸ Vella 1998, p. 80

⁵⁹ *Ibid.*, p. 75

⁶⁰ Dunand and Duru 1962, p. 235

⁶¹ Grainger 1991, pp. 81-82

⁶² Corbett 1983, p. 88

not the dominant feature, so perhaps the analogy is not a good one. As argued above, the only datum we have to propose a religious function for the Eastern Temple at Oumm el-'Amed consists of the repetition of the symbols (wings, disc and serpents) sculpted prominently on the lintels of various thresholds: the lateral entrance above the temple podium, the Throne Chapel and the courtyard (Fig. 4). It is to a reconsideration of these symbols that I now turn.

Symbols in action: Wings, disc, and serpents

In ancient Egypt the image of the solar disc with the wings of a hawk was originally the symbol of the god Horus of Behdet in the eastern Delta.⁶³ It came to be associated with the king as sun-god, symbolising royalty and protection. The sacred cobra or *uraeus*, the image of kingship par excellence, was added on either side of the disc in the Old Kingdom.⁶⁴ By the New Kingdom the winged sun-disc and *uraei* became a symbol of protection to be found on temple ceilings and ceremonial portals.⁶⁵ The winged disc was adopted in many different areas of the Levant and not least by the Phoenicians. The form of the motif is similar to Egyptian prototypes although changes can be detected over time.⁶⁶ Conscious of the fact that any particular symbol need not have a finite meaning,⁶⁷ we *cannot* assume that the motif had the same meaning for the Egyptians and the Phoenicians. However, its occurrence on certain Phoenician ritual buildings contemporary with the Phoenician religious monuments at Amrith, namely the Persian-period aedicules at the Ma'abed and at Ain el-Hayât respectively,⁶⁸ suggests that it did in fact carry a religious meaning, that, as William Culican would say, 'it seems hardly likely to be meaningless decoration'.⁶⁹ Here I have in mind the stele of Yehawmilk from Byblos, dated to the fifth or early fourth century BC (Fig. 5f).⁷⁰ A personage is shown sitting upon a throne with her feet on a foot stool, holding a sceptre in her left hand; the right hand is upraised in a gesture of blessing. She is depicted with the headdress of the Egyptian goddess Hathor, which suggests she is a deity, probably the Lady of Byblos mentioned in the accompanying inscription.

⁶³ Gardiner 1944, p. 46-52

⁶⁴ Shaw and Nicholson 1995, pp. 302-303

⁶⁵ *Ibid.*, p. 305

⁶⁶ Parayre 1990

⁶⁷ Hodder 1992, pp. 11-23

⁶⁸ Vella 1998, pp. 51-52, 53-58

⁶⁹ Culican 1976, p. 52

⁷⁰ Dunand 1941

She is approached by another personage wearing a conical headdress, presumably Yehawmilk king of Byblos. His right hand is upraised in a gesture that implies adoration or respect; his left hand holds a bowl, which he is offering to the seated personage. The winged disc is placed prominently above. I take the scene to be a record of expressive action of a religious nature and that the personage on the left is indeed the object of reverence. Our reading of the scene is corroborated by its context: the writing on the stele commemorates a portico with a winged disc that Yehawmilk built for the Lady of Byblos. The prominence of the winged disc and its association with a ritual scene, marks out the motif as something important. In another case, admittedly older, the winged disc clearly implies divine protection. I have in mind the representation of the winged sun-disc on a Phoenician gold-plated silver bowl from Praeneste in Etruria dated to the end of the eighth century BC or the beginning of the next (Fig. 6);⁷¹ a duplicate is known from Kourion in Cyprus.⁷² The pictorial narrative in nine consecutive scenes tells the story of a prince who leaves his walled city to go hunting. He shoots a stag, flays it and makes an offering. Above the offering scene soars the winged sun-disc (Fig. 6A). A gorilla creeps up to steal the offering and attacks the prince. Here, the winged sun-disc undergoes metamorphosis: the disc turns into a head with the typical curls of the Egyptian goddess Hathor and a pair of arms reach out to protect the prince and his chariot (Fig. 6B). Aided by a falcon he defeats the gorilla and returns to the city. We can take the winged sun-disc to be a symbol of particular religious significance for the *Phoenicians* in about the fifth century BC. The evidence presented here can be augmented by other references to depictions of the winged disc on a terracotta plaque of unknown provenance now in the Louvre,⁷³ and on numerous seals (Fig. 5e).⁷⁴ But for our purposes here it will suffice to have shown clearly *why* the winged disc can be taken to represent a religious symbol. Having established this point, the proposition that the winged discs with *uraei* at Oumm el-‘Amed have a religious meaning carries more force.

Defining a chapel: A room for a Sphinx throne

Phoenician and Punic scholars have long commented upon the scant evidence for the survival of small shrines or chapels, resorting instead to

⁷¹ Markoe 1985, E2, pp. 189-191, 279-283

⁷² *Ibid.*, Cy7

⁷³ Gubel 1986

⁷⁴ Culican 1962, pls 1-2

representations on votive stelae recovered from tophet sites in the central Mediterranean to argue their existence. In 1876, W. Helbig referred to the similarities between the monumental remains at the Ma'abed at Amrith and the votive stelae from Sulcis in Sardinia, noting that the symbolism adopted for the decoration was similar.⁷⁵ Rawlinson did likewise a few years later, pointing out that the stelae represent scaled-down versions of Punic temples.⁷⁶ In a unique study on Punic architecture, Alexandre Lézine rejected the idea that the representations are adaptations of Greek models, tracing instead Egyptian prototypes, and showing how the latter were modified by the addition of a porch with two columns.⁷⁷

Dunand and Duru's report on Oumm el-'Amed identified Room 11 in the Eastern Temple, from where a sphinx throne was lifted, with a Chapel. Another throne, but smaller, had been recovered from the site by Renan but its exact findspot is unknown.⁷⁸ A similar although larger stone throne also exists at Bostan esh-Sheikh, in a rectangular area denoted Astarte's Chapel with the throne set against a wall. Analogies between both sites, and others on the Phoenician coast, can be sought on the basis of shared symbols in the iconography and the occurrence of similar statuary: the winged sun-disc identified with a Phoenician religious symbol occurs prominently at Oumm el-'Amed on door lintels and stelae, while some statuary belongs to a type that occurs at the *favissae* at Amrith and Kharayeb. The throne flanked by a pair of sphinxes is a favourite motif in Phoenician and Punic art.⁷⁹ The thrones from Bostan esh-Sheikh and Oumm el-'Amed can be traced back to a prototype that appears on the older Ahiram sarcophagus from Byblos, with a high back and curvilinear arm-rests. As Gubel's study has shown, the sphinx throne remains popular throughout the first millennium, undergoing changes in Hellenistic and Roman times.⁸⁰ The sphinxes on the Oumm el-'Amed throne of Room 11 are overtly Egyptian, shown with typical crown, headcloth, and pectoral or *uraeus* bib. The style is, however, Phoenician and the sphinxes on the throne find a close parallel in an older winged-female sphinx carved in ivory found at Fort Shalmaneser in Nimrud.⁸¹ In Hellenistic times, sphinxes resume the characteristics of examples that pre-date the Persian period with the heads receiving Egyptian crowns that they had lost. What is required at this stage is an argument to

⁷⁵ Helbig 1876, p. 216

⁷⁶ Rawlinson 1889, p. 141

⁷⁷ Lézine 1960, pp. 35-41

⁷⁸ Renan 1864, p. 707, pl. 53

⁷⁹ Gubel 1987, pp. 37-75; Markoe 1990, pp. 19-22

⁸⁰ Gubel 1987, p. 74

⁸¹ Winter 1976, pp. 6-7, pl. 3a

show that the sphinx thrones can be used to identify the context where they occur as a religious one.

The sphinx falls in the category of fantastic beasts and composite animals that are usually identified with the supernatural and the divine. Renfrew has argued that when such animals are shown flanking an anthropomorphic personage, it is plausible to infer that that being has divine status.⁸² Winter herself has argued that the sphinx motif in Phoenician ivory carving 'must have had symbolic significance beyond its decorative function'.⁸³ But the problem with sphinx thrones in Phoenician contexts is that they appear to have served also as seats for human beings of apparently royal status, a tradition which is adapted from Egypt and is a continuation from earlier Canaanite times. Such is the case with the Ahiram sarcophagus where a person, taken to be the Byblian king, is depicted seated on a sphinx throne, and attended by votaries in procession. According to Porada the sphinx throne and accompanying lion supports on the sarcophagus elevated the deceased to a "superhuman" status.⁸⁴ But even if the foregoing suggests a certain ambiguity, other evidence indicates that the sphinx thrones had religious associations. The literature on this subject is vast and for this purpose it is sufficient to sketch the outline, and to highlight those aspects where the evidence from our sites offers some new insights.

Mettinger has summarised the information regarding the types of thrones that occur in Phoenicia.⁸⁵ Following others, he argues that the *empty* thrones were the objects of adoration: 'this is [...] empty-space aniconism where the throne is the seat of the invisibly present deity.' But in other cases, it is clear that the throne held a spherical object. On some Roman coins issued in the reign of Aurelius Antoninus (Elagabalus; AD 218-222) by Sidon, the spherical object is placed in a four-columned canopy with wheels, crowned by an architrave decorated, in one case, by a disc and *uræi*.⁸⁶ The spherical object rests on a podium or is supported by two figures which can be taken to be stylized sphinxes.⁸⁷ The numismatist G. F. Hill thought these represented portable shrines for the *baetyl*;⁸⁸ Ronzevalle thought this was the 'Astarte chariot' and that the cultic object was a solar globe.⁸⁹ A similar set-up is recalled by two stone blocks or *cippi*, apparently

⁸² Renfrew 1985, pp. 23-24

⁸³ Winter 1976, p. 8

⁸⁴ Porada 1973, p. 363

⁸⁵ Mettinger 1995, pp. 100-103

⁸⁶ Hill 1911, pl. 3.17-19

⁸⁷ Mettinger 1995, p. 104

⁸⁸ Hill 1911, p. 61

⁸⁹ Ronzevalle 1932

from Sidon, taken to be models of *naiskoi* or shrines.⁹⁰ (Fig. 7) Tentatively dated by E. Gubel to the second quarter of the first millennium BC, perhaps to the early Persian period, they form part of a group of five found in the vicinity of Sidon.⁹¹ Here a throne is seen in front elevation, flanked by something which, with due reservations given the low relief, can be identified with sphinxes. Both examples have tenons or cavities set in the throne, to receive, according to some, the missing sphere.⁹² The reading of the iconography on the coins and the blocks is enhanced when the two thrones from Oumm el-'Amed and Bostan esh-Sheikh are brought into the discussion.

At Oumm el-'Amed no spherical objects were recovered alongside the throne. The seat is not inclined and the throne is clearly empty. But it is the archaeological context of this throne that gives it meaning: the throne was placed above a stone podium in axis with the monumental doorway decorated with a winged sun-disc and *uraei* on the lintel (Fig. 8). Viewed when standing outside the doorway, the elevation immediately brings to mind the many representations in terracotta and stone taken to be shrines, including the earlier examples from Sidon mentioned above.⁹³ Following on a passing reference by Lézine,⁹⁴ I propose that at Oumm el-'Amed a *later* development of those representations can actually be seen in full-scale, and that the object of attention has survived: the sphinx throne. The winged sun-disc flanked by *uraei* above an inverted crescent and smaller disk is placed prominently on the doorway that is framed by a three-stepped Phoenician motif.⁹⁵

On another lintel from Oumm el-'Amed the same religious symbol is approached by personages holding a sceptre, probably the Egyptian ram-headed Khnum sceptre (Fig. 5a).⁹⁶ On the decorated stone block from Sidon (Fig. 8a), the same personages are approaching the throne, while on a Phoenician seal from Tharros in Sardinia, they are shown moving towards a figure seated on a sphinx throne placed inside a canopy crowned by winged sun-discs and *uraei* (Fig. 5e).⁹⁷ The religious reading of these scenes springs from the repetition of the symbols (winged sun-disc, *uraei*) employed alongside an expressive gesture (the raised hand holding the

⁹⁰ Aimé-Giron 1934

⁹¹ Gubel 1987, cat. 3, cat. 4; Wagner 1980, pp. 51-55

⁹² Gubel 1987, p. 38; Falsone 1993, p. 256

⁹³ Aimé-Giron 1934; Moscati and Uberti 1981, cat. 1010

⁹⁴ Lézine 1960, p. 37

⁹⁵ Bondi 1978

⁹⁶ Dunand and Duru 1962, pl. 16

⁹⁷ Culican 1968, p. 65, fig. 4

sceptre). The sphinx throne has to be seen in this wider context, in association with other symbols of a religious nature.

The argument that Room II was indeed a chapel can be augmented by reference to the terracotta figurines, probably votive offerings, found on the floor of the same room, for which parallels exist in the Hellenistic stratum of Kharayeb (Phase 2/Layer I). Taken together these observations lead to the conclusion that the room is indeed a religious building, a chapel. The conclusion is not dissimilar from that proposed by Dunand and Duru but the method of inference here is laid out clearly.

At Hellenistic Oumm el-'Amed the structuring of religious space departs from earlier Phoenician examples of Persian date where shrines are free-standing, like Egyptian-style *naiskoi*. The chapel at Oumm el-'Amed with its shrine was not sited in an open area but was incorporated in a larger complex, the sanctuary of the Eastern Temple. At Amrith, the earlier shrine of the Ma'abed is the focal point of the religious experience: water clearly demarcates space, constituting a physical and conceptual boundary between the shrine and the worshippers. At Hellenistic Oumm el-'Amed, religious space is demarcated by a boundary wall that cuts the sanctuaries off from a disordered, industrial background: thresholds across the wall are marked by monumental entrances, decorated by religious symbols that were common in the Persian period; inside the sacred space, thresholds to smaller religious units, as in the throne chapel at the Eastern Temple, are marked again by the same symbols. For the worshipper, the act of crossing and entering a succession of sacred spaces becomes a persistent engagement with these symbols. Access to the divine is not free and simple, but regulated through thresholds and steps. The climax, in the only case that is apparent, is a sphinx throne, the abode of the deity, placed on a podium opposite the doorway. Only at Bostan esh-Sheikh was a sphinx throne of Hellenistic date set in the open inside a pool of water: customs and rituals transcended historical time; water demarcates space once again; nature, the sky, forms a backdrop.

Conclusion

By trying to defend the religious nature of the remains at Oumm el-'Amed in an explicit and concrete way, I have tried to shed the discipline of the circularity that has characterised past studies for a very long time. For the site presented here, I have simply tried to strengthen what others have said about it by developing an explicit and strong analogical argument

based on acceptable relations of relevance. For Oumm el-‘Amed we can list the archaeological indicators of religious ritual: ritual is acted out in a special complex of buildings set apart from the rest of the town; the sacred zone is rich in repeated symbols (the winged-disc with *uraei*, the inverted crescent above a disc) that are carved on lintels and mark out thresholds and boundaries; the abode of the deity is an empty sphinx throne set in a separate room, that focuses the attention of worshippers. Once the heuristic model proposed here is applied to other sites we can depart from simplistic definitions of Phoenician temples that seek as a basis elusive Solomonic endeavours and instead muster enough courage to define Phoenician religious space crisply and bluntly.

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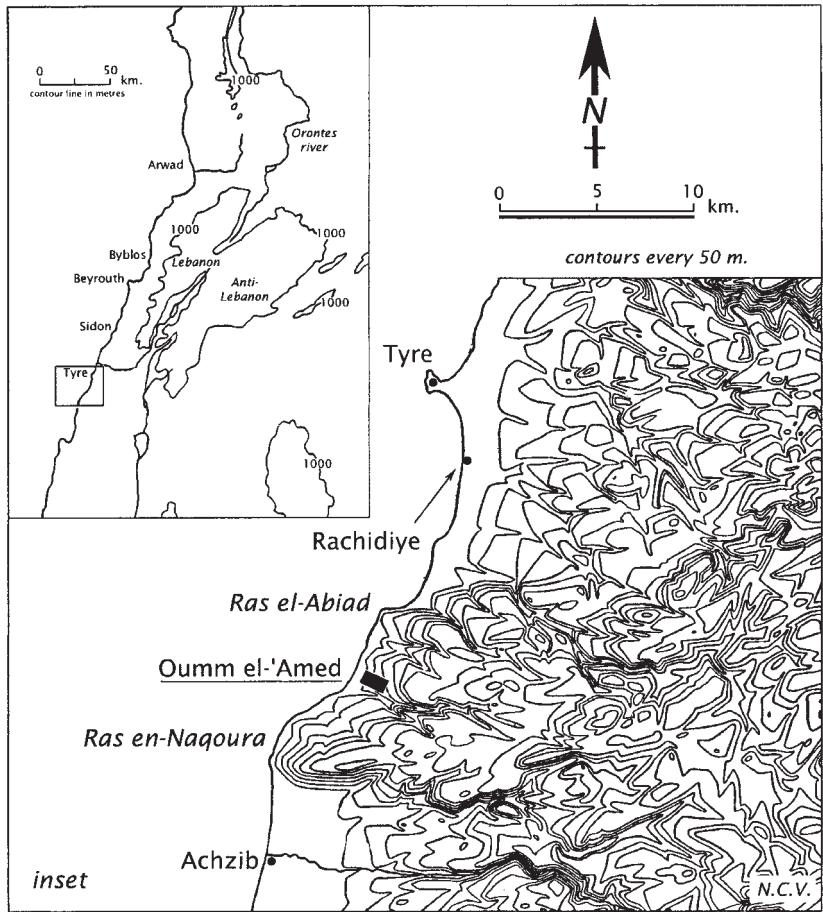


Fig. 1. Site location map: Oumm el-'Amed in its Levantine context.
(after Dunand and Duru 1962: fig. 2)

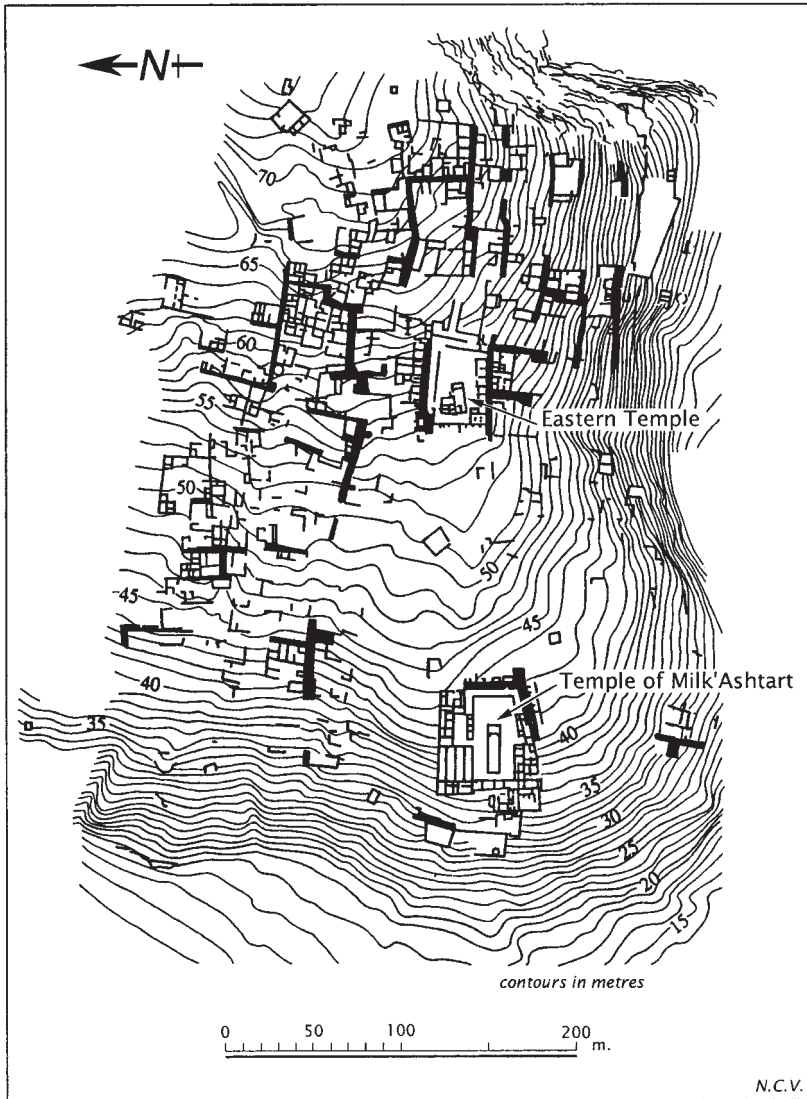


Fig. 2. Oumm el-'Amed: city layout and topography.
(after Dunand and Duru 1962: fig. 20)

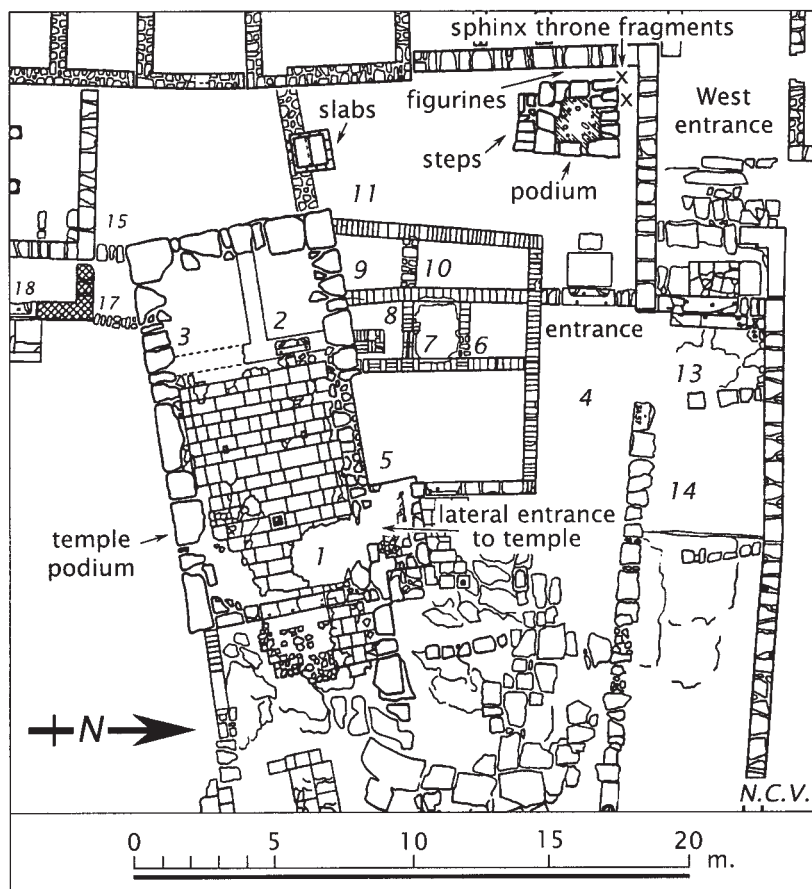


Fig. 3. Eastern Temple, Umm el-'Amed: plan of temple podium and Room 11.
(after Dunand and Duru 1962: pl. 100)

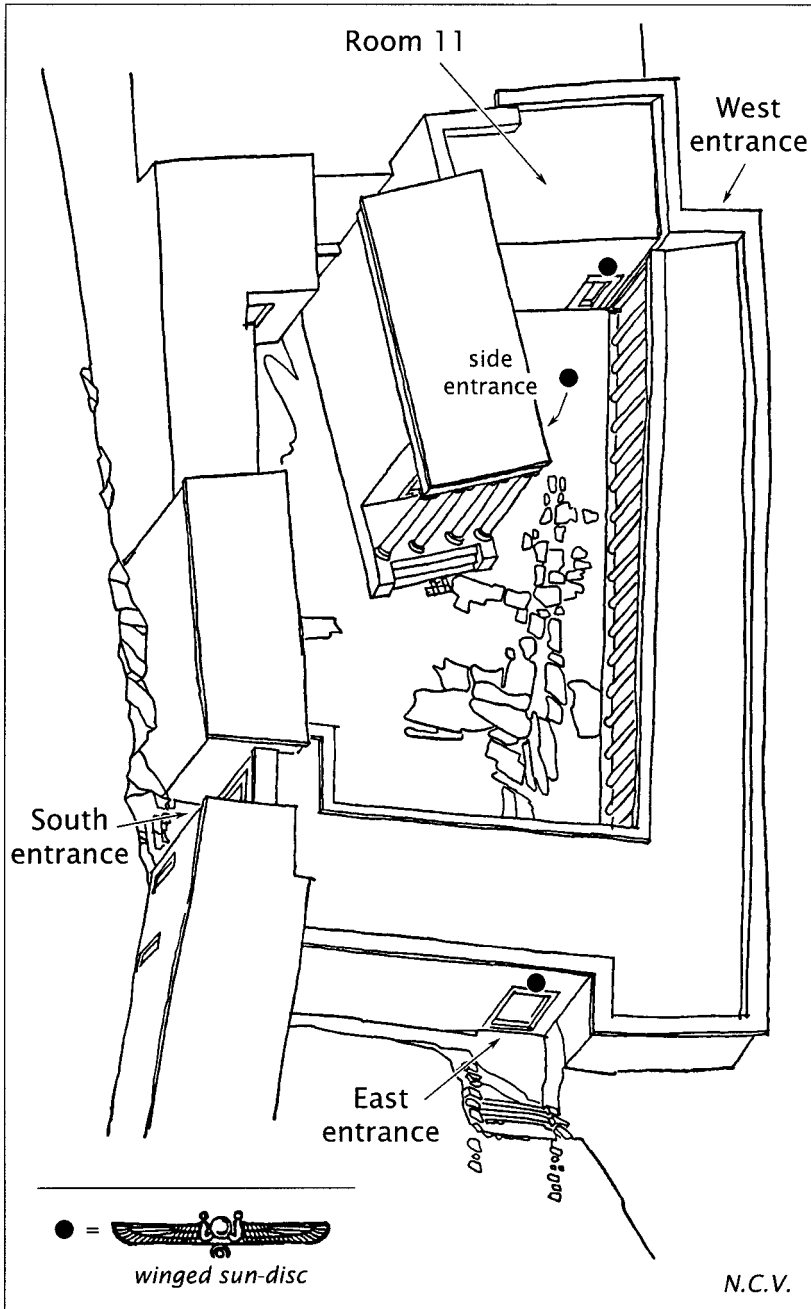
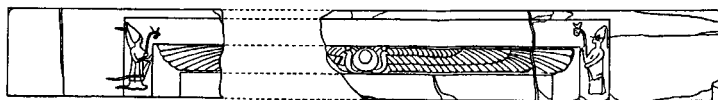
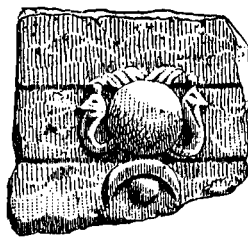
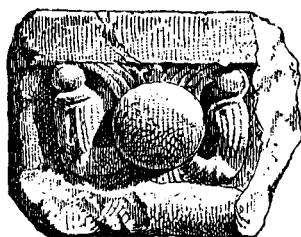


Fig. 4. Eastern Temple, Umm el-'Amed: reconstruction drawing of complex.
(after Dunand and Duru 1962: fig. 17)



a. Eastern Temple, Oumm el-'Amed: lintel of East entrance
(after Dunand & Duru 1962: pl. 16)



b., c. Oumm el-'Amed: disc, serpents and crescent on cornice (left) and lintel (right) fragments
(after Renan 1864, pl. 55)



e. A seal from Tharros
(after Culican 1968, fig. 4)



f. Upper part of stele of Yehawmilk (left) and its ritual scene (right)
(after Perrot & Chipiez 1885, fig. 23, and Gubel 1986, fig. 2a)

not to scale

N.C.V.

Fig. 5. Wings, discs, and serpents.

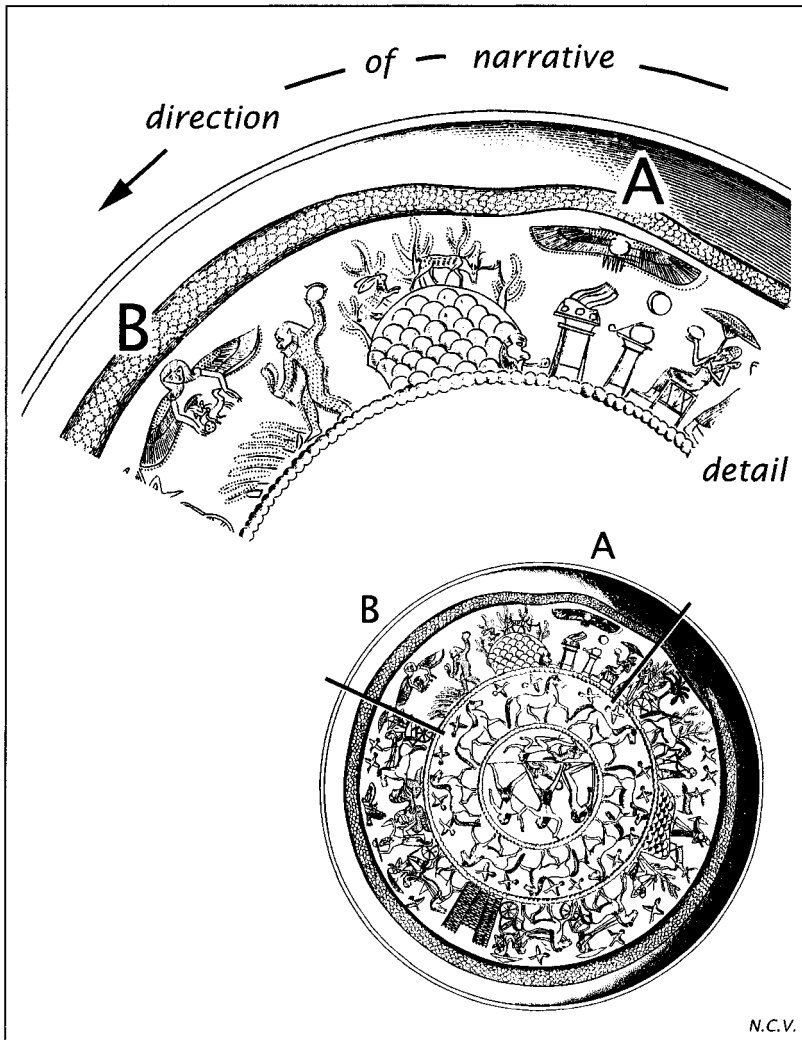
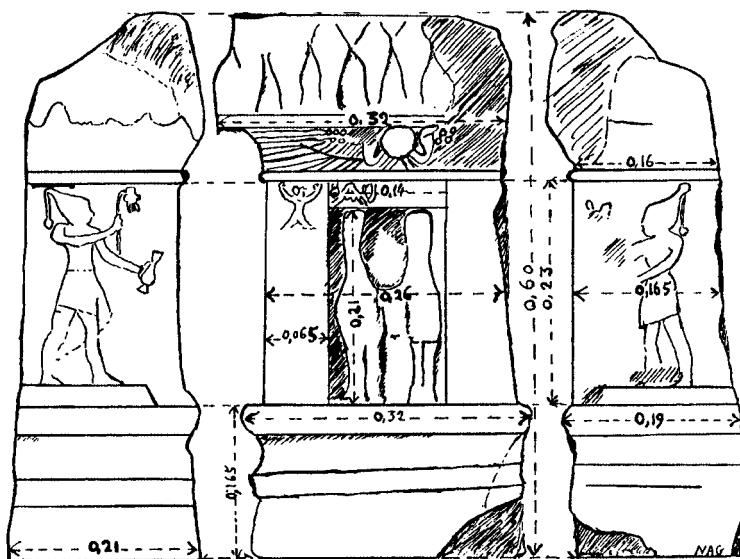
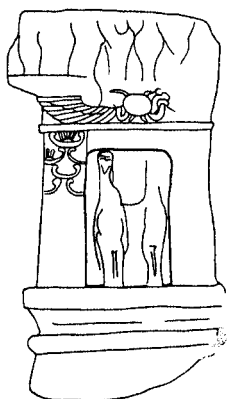


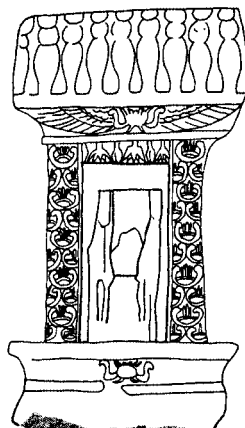
Fig. 6. Gold-plated silver bowl from Praeneste, Italy,
and detail. Diameter of bowl: 0.19 m.
(after *Moumenti Inediti pubblicati dall'Istituto di Corrispondenza Archeologica*
10 (1874-1878): pl. 31)



a. Phoenician shrine model from Sidon (?), preserved in the Louvre as reproduced by Aimé-Giron (1934).



b. Shrine model shown above as reproduced by Bisi (1971).



c. Phoenician shrine model from Sidon (?) preserved in Istanbul. Height 0.65 m.

N.C.V.

Fig. 7. Phoenician shrine models.

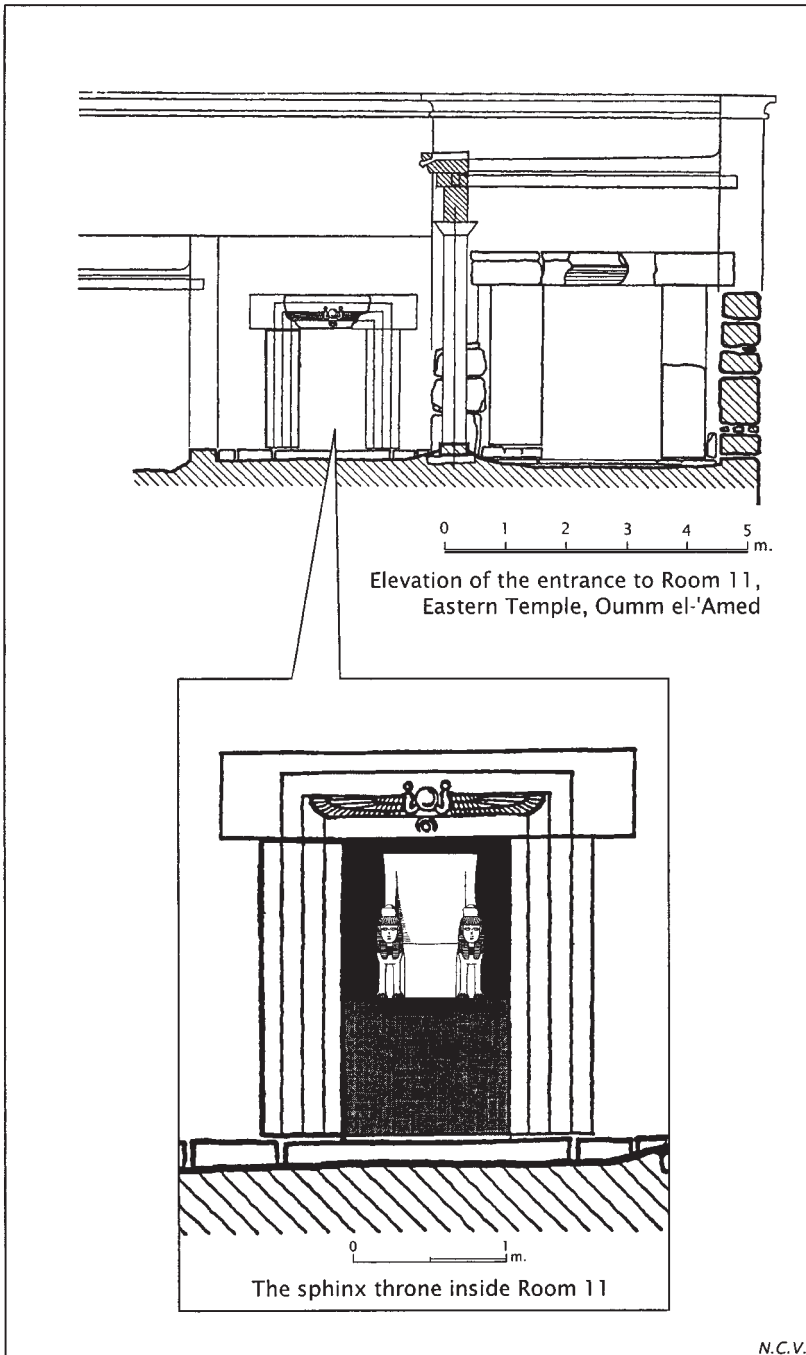


Fig. 8. Eastern Temple, Oumm el-'Amed: Elevation of the entrance to Room 11 (after Dunand and Duru 1962: fig. 15); inset: reconstruction of the sphinx throne inside Room 11.

Excavations at Sos Höyük, 1998 to 2000: Fifth Preliminary Report

Antonio SAGONA

Centre for Classics and Archaeology
School of Fine Arts, Classical Studies and Archaeology
University of Melbourne
Victoria 3010
AUSTRALIA
Fax: 61 3 8344 4161
E-mail: a.sagona@unimelb.edu.au

Claudia SAGONA

Centre for Classics and Archaeology
School of Fine Arts, Classical Studies and Archaeology
University of Melbourne
Victoria 3010
AUSTRALIA
Fax: 61 3 8344 4161
E-mail: c.sagona@unimelb.edu.au

Abstract

*Seven seasons of archaeological investigations at Sos Höyük, an ancient mound site near Erzurum, north-eastern Turkey, have provided us with a reliable stratigraphic sequence of the human occupation for the mountainous region. Five broad cultural periods have been tentatively distinguished to date, ranging from the Late Chalcolithic (Period VA) to the Medieval (Period I). Discoveries during 1998-2000 have enabled a reassessment of the early settlement history at Sos Höyük and the site's inter-relations with neighbouring regions, especially Trans-Caucasus. Among the highlights are a Late Chalcolithic ('Proto-Kura-Araxeian') settlement distinguished by monumental stone wall, well-preserved Middle Bronze Age buildings, and a burnt Early Iron Age room with fine examples of carbonized basketry**

* We wish to thank the Turkish Ministry of Culture for granting us a permit to enable this project to continue, and to various individuals and organizations who have offered

The seventh season of archaeological work at Sos Höyük, Erzurum, was concluded in 2000. This paper outlines on the main results of the last three seasons of excavations that were carried during 1998-2000. The nature of investigations varied over this period. In 1998, two weeks of fieldwork, focusing on the investigation of specific site formation processes, was followed by four weeks of intensive artifact analysis, whereas in the next two seasons both aspects of work were carried out simultaneously. Our broad objective over the three year period was to refine the stratigraphic sequence in order to better understand the development of this complex multi-period site. The specific objectives were to:

1. Understand the constructional history of the large monumental stone wall established soon after the site was settled.
2. Investigate the earliest phases of occupation, currently dateable to the Late Chalcolithic period, initially through an exploratory trench (1998) and subsequently by means of wider horizontal exposures.

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3. Expose the residential area contemporary with the shaft graves of the Middle Bronze Age that had been found in earlier seasons.
4. Enlarge the area in J14, investigated in 1995,¹ with a view to preserving the rich carbonized organic remains of the Iron Age I period and thereby have a clearer understanding of household assemblages.

Accordingly, work during the three seasons concentrated mostly on the northern side of the mound (Fig. 24) where operations were extended to the very back walls of a row of modern houses that were built into the mound in the 1980s, before our work began. In this paper results are presented from the earliest deposits (Period VA) upwards, following a periodization scheme detailed in another article,² which also contains discussions of comparative material that are here kept to a minimum.

Late Chalcolithic: Period VA (3500/3300 — 3000 Cal BC)

Presently, data from trenches L17 and M17 on the northern side of the mound suggest that Sos Höyük was first settled in Late Chalcolithic (Period VA). But we know little about the earliest settlers, having reached the lowest level only in a small exploratory trench dug in Trench L17/M17 in 1998. Excavations revealed a series of burnt floors and some very large stones that superimposed a gravelly virgin soil. Finds included a twin-horned, portable hearth (Fig. 25), a type which continued to remain popular for many centuries, and a stone blade showing extensive use wear sheen along one edge (Fig. 26). A radiocarbon reading from the base of the sounding calibrated to a 2-sigma accuracy (Beta-120452: Cal BC 3500 to 3435, and 3385 to 3285, and 3245 to 3105) points to the second half of the fourth millennium BC for initial occupation at Sos Höyük.

We have a better idea of architecture in the level above that is represented by a few rooms with a lime-plastered floor and mud brick walls founded directly onto the earthen surface. Only one room (M17, Locus 3780), the easternmost, sited against the rear wall of a modern house, was fitted with a hearth built into the floor; the other room (M17, Locus 3779) had three post-holes that punctured a lime plaster floor.

Shortly after these earliest occupations, the character of Sos Höyük changed markedly. The inhabitants of the village felt the need to build a

¹ Sagona, Erkmen, Sagona and Thomas 1996. pl VI:b, c. An overview of the project that contains a large selection of images and a brief site history may be obtained on the following website *The Northeast Anatolia Archaeological Project*. <http://www.sfca.unimelb.edu.au/turkey/hoyukfest.swf>

² Sagona 2000; Kiguradze and Sagona (in press).

very large stone wall (Fig. 27). First reported in 1996³, the sector of wall exposed so far is curved and solidly built of locally acquired field stones, ranging from about 25 cm to 70 cm in length. The wall measures 2.5 m across, whereas its height has been preserved, in parts, to over 1.75 m. These foundations presumably had a mud brick superstructure, though no evidence of it has survived. In 1999 a semi-circular lobe attached to the wall's eastern face was exposed (Fig. 28). The stones used in the construction of this component are similar in size and type to those of the wall, but we cannot be certain at this stage about its date of construction relative to the wall itself.

So what was the purpose of this monumental stone construction? It now seems clear that this wall did not belong to a large building, but rather it seems to constitute a spatial boundary of some sort. Without knowing the full extent of the Late Chalcolithic settlement, or the complete plan of the wall (for much of it lies in the unexcavated area at the centre of the mound), it is difficult to determine what area it originally demarcated. To judge by its location, it is unlikely that the wall served as a perimeter. Instead its purpose may have been to define space at the core of the settlement, which would imply that areas inside and outside the wall were differentiated either in terms of function, or perhaps along socio-political lines. One thing is certain namely, that the wall was destroyed at least twice. The absence of scorching rules out fire as a cause, and there is no evidence to suggest that warfare played a part in the collapse. Rather, as we suggest below, it seems likely that an earthquake caused the wall to tumble, for we must remember that Sos is located directly on the notorious north Anatolian fault line.

Dwellings and floor deposits associated with the earliest building phase of the wall, *before* the first collapse, have been found on both sides of the stone wall. The use of stone for foundations stands in sharp contrast to earlier constructions and is more in line with the character of the wall itself. The inside settlement is evidenced by Locus 4299, in Trench L17b, a burnt plaster surface that did not contain the standard built-in hearth, but yielded another fine example of the twin-horned andiron (Fig. 29). A small deposit of phytolith was collected for radiocarbon analysis, but it did not yield a very helpful date with a calibration range of 3085 to 3055 Cal BC, 3040 to 2855 Cal BC and 2810 to 2690 Cal BC (Beta - 135363). Given the dates from more secure later levels (see below), the upper range of this segmented reading should be considered the most accurate. Above this floor a round

³ Sagona, Erkmén, Sagona and Howells 1997: pls 11, 12; Sagona, Erkmén, Sagona, McNiven and Howells 1998: pl.5.

hearth was found associated with a hard-packed, burnt orange surface (L17b, Locus 4279).

The next level, best preserved in M17 (Loci 3766, 3768 and 3770), comprised three interconnecting rooms each fitted with a circular hearth. The easternmost hearth (Fig. 30) was bedded on a thick layer of river sand (locally known as *kum*) and surrounded by fragments of two types of hearth props and pottery vessels. Nearby and to its south, a hearth 90 cm in diameter and centred by a pot, was conspicuous for its red-black colour scheme. The stone footings that separate the northern and southern halves of the dwelling are quite substantial.

The latest of these 'pre-collapse' Late Chalcolithic dwellings revealed the surviving southern portion of a dwelling perched at the very northern edge of the mound, in trench M17. Founded on several courses of irregular stones, the dwelling's western side was built against the eastern face of the large stone wall. The floor of the house was plastered with lime several times and was fitted with a hearth that is noteworthy for its method of construction. Built on a raised platform of soil that bore traces of scorching, the hearth comprised a modified ceramic vessel surrounded by ten stones embedded vertically in the soil in a U-pattern (Fig. 31). Behind the hearth, lay a substantially complete pot, an obsidian blade and portable hearth fragments. To the east lay an elevated semi-circular feature (M17, Locus 3765), most probably an oven base, with a burnt plaster surface and edged in mud brick.

Some time around 3100 Cal BC, the northern sector of the wall collapsed, leaving the revetment and part of the eastern face standing. The inhabitants did not rebuild the structure immediately, preferring to clear the collapse and build houses around and over the undamaged portions of wall. The first 'post-collapse' floor level (L17b, Locus 4270) is distinguished by a deposit of pottery sherds that were purposefully crushed on a fine layer of river sand (Figs 32-33). Sherds also surrounded a circular hearth (Fig. 34), embedded in a layer of the same sand, which had been placed against the inner face of the curved wall. A strikingly similar example of this practice of associating a hearth with a floor of pottery sherds was uncovered at İkiztepe level 2, on the Black Sea littoral, that has been dated by the excavators to the third millennium BC.⁴ To judge from the contemporary use of similar sand by the villagers of Yiğittaşı who position their bread ovens in a layer of *kum*, the use of the sand in a Late Chalcolithic context at Sos is not likely to be fortuitous. At Yiğittaşı, bread ovens are built of clay. They are

⁴ Alkim, Alkim and Bilgi 1988:pl. LXVI:15.

cylindrical in shape, about a metre deep, and are sunk into the earthen floor of a room or courtyard. According to the inhabitants of Yığıttaşı, *kum* acts as an effective insulator that retains heat in the oven hours after the embers have been extinguished.⁵ It is quite likely, then, that the combination of ceramic sherds above a layer of river sand provided an effective means of insulation for Late Chalcolithic houses during this period. Presumably, the heat generated by the permanent hearth would have traveled along the ceramic sherds, an effective conductor, but would have been prevented from draining into the earthen floor by the layer of *kum*.

But it appears that this method of insulation was restricted to that particular Late Chalcolithic floor. Above the ceramic sherd deposit lay a house that was rectilinear in plan (L17b, Locus 4254) with a central, circular, clay hearth set in a lime plaster surface, and a stone bench running against the east side of the standing foundations of the curved wall. In marked contrast was the subsequent dwelling, a freestanding house (L17b, Locus 4250) roughly circular in plan (Fig. 35), that was built of mud bricks placed directly onto the ground. Within the house a hard-packed surface of clay was covered with a layer of burnt debris that contained much carbonized organic matter, including matting. As one entered the house, on its western side, attention would have been drawn to the circular hearth built into the centre of the floor, virtually in the same position as the hearth of the earlier building. To the left of the doorway were portable hearths and the posthole of the main support, whereas across the floor lay a number of ceramic vessels. A little later, when the house was abandoned, a pit was dug inside the house along the southern boundary, and was filled with pottery and ash. Radiocarbon analysis of charcoal of samples collected from the house floor has given a two sigma reading of 3345 to 2915 Cal BC (Beta-135362).

Not long after the round-house burnt, the inhabitants of the village rebuilt the stone wall, which effectively sealed three levels — the crushed pottery floor, the rectilinear house and the round-house — between the original wall foundations and the rebuilding. The reconstruction of the wall was skillfully executed, though a 'fault line' (Figs 36-37) on the interior face indicates the juncture of the two building phases. The round-house provides a sound *terminus ante quem* and suggests that the reconstruction occurred sometime around 3000 BC, though how long it remained intact before the second collapse, again brought about by an earthquake, is difficult to determine at this stage. We suspect that the rebuilding was short-lived, and after its second destruction the wall remained in ruins.

⁵ I would like to thank Richard Heap, a trench supervisor, and his trench co-workers for this observation.

The pottery sequence for the Late Chalcolithic (Period VA) has been discussed elsewhere,⁶ but it is worth repeating, in brief, the main characteristics. In terms of fabric, the most notable feature is the association of three main groups. One has a dark paste, baking orange near the surface. Vessels are generally friable and gritty to touch with surfaces that are highly burnished and slipped in black or dark grey; rarely, they are a red-brown burnished on the exterior. Of the three groups, this is closest to Kura-Araxes pottery, and, accordingly, may well be termed 'Proto-Kura-Araxes'. Significantly, this group shares many forms with the other two ware categories. One of these has a coarse, dark core with a lot of voids and mixed grit inclusions, breaking with sharp angular edges. Exterior surfaces vary in treatment. They can be a mottled greyish brown (around 10YR 5/4), matt and self-slipped, cream-slipped (2.5Y 8/3), or even lightly burnished. With the exception of the cream-slipped variety, which is not common, the fabric may be termed 'drab'. The third group is relatively rare at Sos, though more common in Trans-Caucasus. Sherds have a compact fabric with well burnished and slipped surfaces. Colours range from pale browns through reds to yellows (around 10R 4/6, 2.5YR 4/6); cores are dark grey.

Typologically, certain vessel forms should be noted. They include small jars with a biconical body and a straight, slightly swollen neck (Fig. 6:1-6), jars with a pair of loop handles attached to an elongated neck (Fig. 6:7), cups with a curved profile (Fig. 6:8), large jars (Figs 7:1-3; 13), various bowl shapes (Figs 7:4; 8:5-6), and flat lids (Fig. 9). While these forms foreshadow the later Kura-Araxes repertoire, two shapes point to firm roots with earlier traditions.⁷ These are the shallow trays (Fig. 12:1-4), commonly found in Trans-Caucasus where they are often perforated around the rim with a row of holes around the lip, and the holemouth jar (Fig. 12:6). Presently, the pedestal base (Fig. 12:6) stands alone. A number of sherds, probably part of one or two vessels, have an unusual decorative combination of bold relief spirals and fine incised decoration (Fig. 8:1-2, 4). Small pellets attached to the body are also used as ornaments (Fig. 8:3). The sherd illustrated here in Fig. 38 is instructive for the light it throws on the method of manufacture of relief ornamentation. It appears that the potter incised the outline of the design before applying the ornament. Hearths are common and are mostly the twin-horned variety (Figs 10:1; 11, 25, 29). Individual, vertical props (Fig. 10:2) often found in twos or threes are also found. Towards the end of Period VA, the U-shaped portable hearths (Fig. 15) mark the beginning of one of the hallmarks of the Kura-Araxes tradition.

⁶ Sagona 2000; Kiguradze and Sagona (in press).

⁷ Kiguradze and Sagona (in press).

Other craft items of this period include three well faceted beads with multiple perforations (Fig. 23:1-3), found in the round-house, that attest to a considerable degree of skill. Obsidian is the material most often used for the production of stone tools, though occasionally other stones were used for blades (Fig. 26). Bone tools (Fig. 19:1) are present, but develop in quality and in number with time.

Early Bronze Age I: Period VB (3000-2800 BC)

The Early Bronze Age I period was investigated primarily in Trench M16 and contiguous areas. Initially these were defined by segments of floor levels, but none was very clear. The most distinctive, a layer of evenly sized riverine cobbles covered with soft brown soil speckled with charcoal, contained pots *in situ* scattered around a hearth. Beneath the cobbles lay the semi-circular lobe attachment of the Late Chalcolithic wall (Fig. 28), that was re-used as a small enclosure for a hearth during this period.

In trench M17, at the northern edge of the site, half a stone-based house was uncovered (Figs 1, 39). Freestanding and presumably single-roomed, the structure has many of the characteristics of Kura-Araxes dwellings, including a fixed circular hearth defined by an outer ridge and a central ceramic bowl to contain the embers. Several hearths were found stacked above this hearth, each representing a different floor level. A more elaborate hearth was found nearby (Figs 40-41). It was manufactured in two halves and decorated with a geometric design on the surface.

The pottery repertoire shows a development of earlier types (Fig. 14:1-2) with certain vessels foreshadowing the girth accentuation of later periods. A large storage jar (Figs 42-43) here shown in two parts bears a geometric design in a style similar to that on the hearth. A ground stone object (Fig. 19:2), bone points (Fig. 19: 3-4), a fine bronze pin (Fig. 19:5), modified ceramic discs (Fig. 19:6) and many obsidian tools, mostly flakes, but including some well crafted projectile points and blades (Figs 44-45) are among the assemblage items of this period. A perforated, white stone bead (Fig. 23:4) is a type that had a long history at Sos Höyük, especially in later centuries when it featured with grave goods.

Early Bronze Age II: Period VC (2800-2500 BC)

In the Early Bronze Age II, residences remained relatively unchanged. Built with mud brick walls set on high stone foundations, most of a

single-roomed house was exposed in M16/N16, against the rear wall of a modern village house (Figs 2, 46). Although two later burials cut its south-west corner, the dwelling conforms to a ubiquitous rectangular type that often has rounded corners. A circular clay hearth originally with three central projections was fixed into the floor and decorated with a double spiral design (Fig. 47). Behind the hearth was a bench that ran along the back wall. A narrower bench ran along the west wall, complementing a clay bin in the north-west corner that provided a further storage facility. Two radio-carbon readings (Beta-120451 and OZD-713) taken from charcoal collected within the hearth point to a 2-sigma range stretching from about 2900 to 2500 Cal BC.⁸ Ceramics within the house were all black burnished (Fig. 14:3-5).

Early Bronze Age III: Period VD (2500-2200 BC)

Deposits uncovered in Trench L16 towards the end of 2000 are here provisionally attributed to the Early Bronze Age III. Excavations exposed a series of plaster lenses, ash layers (Loci 4154, 4160 4159), including charcoal beams and burnt mud brick all within a matrix of very loose dry powdery soil. The first coherent plan was in the form of an ashy plastered surface of part of a room (Locus 4161) with rounded corners. Although it was not constructed on a post framework, wooden supports were used for an internal feature located in the south-west corner. This series of interleaving deposits superimposed a layer of stones first exposed in L17a in 1995.⁹ Two animal figurines (Fig. 21: 4, 5) associated with an isolated hearth in M16d/N16c, and a fine ceramic crucible (Figs 48-49), found on the top of a trash pit that cut into the Late Chalcolithic wall, all belong to Period VD.

Middle Bronze Age I: Period IVA (2200-2000 BC)

In earlier reports we drew attention to a series of burials found in the northern operation that belonged to the Trialeti tradition of mortuary practice.¹⁰ Elsewhere in Trans-Caucasus settlements of Trialeti date are rare.¹¹ Thus a residential unit consisting of two rooms that were contemporary

⁸ Beta-120451: 4160+/-60 BP; 2 sigma: Cal BC 2895-2570. OZD-713: 4140+/-70 BP; 2 sigma: Cal BC 2873-2510.

⁹ Sagona 2000.

¹⁰ Sagona, Erkmen, Sagona and Howells 1997; Sagona, Erkmen, Sagona, McNiven and Howells 1998.

¹¹ Mansfeld 1996.

with some of the burials at Sos Höyük and dateable to the very end of the third millennium BC is significant. Structurally, the dwelling, found stretched across Trench L16 (Figs 3, 50, 51), was based on good-quality foundations built of riverine stones. The cobbles measured approximately 16x12x8 cm and were laid two across, and were preserved up to six courses deep. The western, larger room (Locus 4140) was rectangular in plan. It had a mud bench covered in lime plaster along the west wall and part way along of the north wall. In front, positioned slightly off centre, was a circular hearth defined by an outer ridge. The other room (Locus 4144) was narrower; its hearth was not as well constructed, comprising a modified vessel set into the floor (Fig. 52). Part of an open area with a mud-plastered pit was located to the north of these rooms.

Preference for black burnished pottery is clear (Figs 14:7-8; 16:1, 3), as is the growing interest in trays with decorated fronts (Fig. 16:2) and lids with a central depression (Fig. 18:3). Deep, open bowls (Fig. 18:1) occur, but are not common. Although U-shaped hearths increase in popularity, the twin-horned variety (Fig. 17) is still used. A tanged antler projectile point (Fig. 20:2) is a type that continued to be crafted throughout the first half of the second millennium BC and is one of many items (Fig. 22:1) of bonework that characterize the Middle Bronze Age. Sometime around the transition of the third and second millennia, the residence was abandoned. A relatively thin plaster floor and pits above this house (Fig. 4; Loci 4141, 4143, 4137, 4150) suggest that the area was used as a transitory camp site before the construction of the Period IVB complex.

Middle Bronze Age II: Period IVB (2000-1500 BC)

Permanent architecture returned to L16 soon after the pit interlude and was again represented by a substantial residence orientated NE-SW (Figs 5, 53, 54) and constructed of good quality mud bricks. First exposed, in part, in 1995, the structure was built of standardized mud bricks and comprised at least four main rooms. Each room, except the central one, contained a circular hearth built into its lime-plastered floor. Two hearths had a flat surface, whereas the one in westernmost room had three high projections and a red, well burnished exterior (Fig. 55). Mud-plastered benches were common and the largest room had what appeared to be a semi-subterranean storage area.

With the abandonment of this structure permanent architecture disappeared from this area of the mound until the beginning of the Iron Age.

The rest of the Middle Bronze Age is represented by a series of pits and ashy lenses. Within this matrix (Loci 4087, 4088 and 4097) was Pit 9 (Locus 4085), a large trash pit that contained a considerable amount of ceramic fragments (Fig. 56), a tray fragment, a bead (similar to Fig. 23:5-7), animal bones and seeds. The pottery belongs to what we have called 'Kura-Araxes Late Gritty' ware (Fig. 18:2) that is distinguished primarily by a large amount of white grit inclusions.¹² A well-crafted projectile point (Fig. 20:1), found nearby, outside the house, is clear evidence of the advanced bone working industry (Figs 20: 3; 21:1-3,6), as is the a perforated antler mace head (Fig. 57). A miniature ceramic wheel (Fig. 21:7) belongs to the end of this period. A thick plaster surface (Locus 4061) sealed this deposit.

Later still, in Trench L16d, a large number of pits (part of the so-called 'Pit Phase' of earlier reports) and a burial belonging to the very end of the Middle Bronze Age were exposed. The pits were plaster-lined and similar in size and shape to those uncovered in previous years. One pit had a deliberately, perhaps symbolically, inverted black burnished bowl at its centre (Figs 14:6; 58). The burial, on the other hand, is the first of its type at Sos Höyük. A cluster of animal bones was placed in a pit alongside a number of ceramic vessels (Fig. 59). A radiocarbon analysis of a sample of bone provided a reading of 1630–1520 Cal BC.

Late Bronze Age: Period III (1500-1000 BC)

The late second millennium BC is the least understood period at Sos Höyük. In 1999 deposits were investigated in Trench L16, but the western half, L16c, was quite featureless, apart from a bell-shaped pit (Pit 2). This confirmed our earlier suspicions that during the Late Bronze Age the northern sector of the mound did not contain residential units. Rather it appears to have been an industrial area. Split and burnt bones were collected, but not as large a quantity as was found in L16d in 1998. This bone deposit lay on top of a greyish white plaster surface (Locus 4061) that is part of the very hard packed surface uncovered in 1997 in L16d (Locus 1785).¹³ Judging by the amount of bone and ash, and the compactness of the surface in L16, the focus of the working area appears to have been L16d. The remains of an oven consisting of a flue leading into one of two depressions support this idea of an industrial area.

¹² Sagona 2000.

¹³ Sagona, Erkmén, Sagona, McNiven and Howells 1998.

Iron Age: Period II (1000-200 BC)

Investigations were resumed this year in Trench J14, on the western flank, with a view to extending the area that, in 1995, yielded the burnt Early Iron Age room sealed by its roof debris — white organic material and carbonized beams (Fig. 60). The room's very fine lime-plastered floor was strewn with impressive carbonized remains of basketry and matting.¹⁴ Similar remains were exposed in 1999 within a room ascribed to Locus 1293. Well-preserved but extremely fragile fragments of matting, basketry and rope (Figs 61-63), a preservation challenge even for the most experienced conservator, were among the remains. Even a twine sandal (Fig. 64) was found lying on the floor. Fragments of burnt furniture were mixed in the debris with ceramic items (Figs. 18:4; 22:3), including a black burnished *askos* (Fig. 65) that contained a substantial amount of oil seeds. Above this burnt room, three levels represented primarily by corners of large units continued the sequence into post-Achaemenid (Period IIB) times.

Conclusions

Through further excavation in the northern operation, the nature of the earliest settlements and the evolution of the monumental stone wall are certainly clearer. Sometime around the mid-fourth millennium BC, Sos Höyük was settled by bearers of a cultural tradition that was germane to the formation of the Kura-Araxes (Early Trans-Caucasian) complex. Period VA ceramic assemblage, in particular, illustrates a fusion of influences. It certainly foreshadowed some of the hallmarks of the better known third millennium repertoire, but types such as holemouth jars and pale-coloured containers point to continuity with earlier traditions.¹⁵ Indeed what has come to be known as 'classic' Kura-Araxes may, in fact, turn out to be an amalgam of traits from both Trans-Caucasus and eastern Anatolia. Whatever their origins these earliest inhabitants exhibited a considerable ability to organize labour, for not long after their arrival they constructed the massive wall, and rebuilt it after it collapsed, presumably caused by an earthquake. The function of the wall is not altogether clear, but it appears to have defined space at the heart of the settlement, which may point to either an economic or socio-political division of some sort.

¹⁴ Sagona, Erkmen, Sagona and Thomas 1996.

¹⁵ Kiguradze and Sagona (in press).

Around the beginning of the third millennium BC, the wall collapsed for a second and last time. Subsequently, Sos Höyük was drawn the orbit of the eastern half of the Kura-Araxes complex (Periods VB-VD). Its cultural connections with sites in Tans-Caucasus are clear, but the strongest links were with settlements in the Erzurum province, which emerged as a well-circumscribed area.¹⁶

Excavations over the last three years have also provided valuable insights into late third and early second millennium residences (Periods IVA and IVB), that up till now were rather elusive in the archaeological record. We now realize that certain dwellings, contemporary with some of the tombs of Trialeti tradition found at Sos, were multi-roomed and quite substantial. Significantly, although the structure and plan of the residences are not typical of the Kura-Araxeian cultural tradition, their internal cultural domain fits comfortably within it.¹⁷ It is also clear that there were instances in the history of the site, especially in the second millennium, such as the period between the two substantial Middle Bronze Age structures, when Sos was a location of temporary camps. Interleaving thin-plastered floors and considerable number of pits are suggestive of a mobile lifestyle.

During the Late Bronze Age (Period III), the settlement pattern at Sos changed when the northern sector was turned into an area for processing meat if the thick deposit of bone and ash are any indication. Then with the beginning of the Iron Age, substantial multi-roomed buildings were constructed across the entire summit of the mound. In 1999 investigations focused on Trench J14 where a burnt room of the Iron Age I date (Period IIA) preserved remnants of basketry, thereby providing us with a rare glimpse of otherwise invisible items of a highland household.

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Catalogue

Each entry begins with a notation representing the object's stratigraphic context. The three components are: Trench/Locus/Basket. Occasionally an artifact number is also listed.

Figure 6

1. M17/3756/14. Late Chalcolithic (Period VA) Fragment from a small, deep bowl; very thin-walled; HM; compact black fabric with semi-fine gritty inclusions and a few small voids; sandwich core, black toward exterior, red-brown 5YR 5/6 interior and over lip; high burnished exterior and interior rim; smoothed lower interior.
2. M17/3756/14. Artifact 3402. Late Chalcolithic (Period VA). Small, deep bowl; thin everted rim; off-set neck and carinated body; thin-walled; some heat damage to the flat base; HM; medium-textured clay with fine to medium mixed gritty inclusions and fine voids in the paste; even-coloured dark grey N5/-N4/ fabric; matt, smoothed interior; mottled light olive brown slipped, burnished exterior; light red 10R 6/6 painted spots and fugitive vertical zig-zag lines on the body.
3. L17d/M17c/4235/49. Late Chalcolithic (Period VA). Straight-necked jar with biconical body; wall of neck is slightly swollen; HM; fabric with medium grit inclusions; abraded around the belly and rim, probably from use; section reveals two contrasting colours — black on the exterior and red brown 5YR 5/6 on the interior; exterior surface is burnished, the interior is smoothed and red brown, except for under the rim which is black.

4. L17b/4243/10. Late Chalcolithic (Period VA). Jar with recessed neck, everted rim and biconical body; HM; relatively thin-walled with medium grit inclusions; both surfaces are mottled; the exterior is well burnished and colours range from red brown 5YR 5/6 to grey brown 10YR 6/4 with occasional black, smoke patches; the interior is smoothed, except for the rim which is burnished, and smoke-blackened around the base.
5. M17/3766/48. Late Chalcolithic (Period VA). Deep bowl with thickened belly and everted rim; sharp off-set at the juncture of neck and shoulder; HM; very friable, dark grey 7.5YR 4/1 clay with decayed interior from use as a cooking pot; laminated section with voids and a small amount of very fine mixed gritty inclusions; pale-slipped and plain interior; light brown 7.5YR 6/3 exterior neck; smoke-blackened lower; two pairs of deeply incised grooves on shoulder. The widest part of the pot shows scarring from being placed in a stand or hearth.
6. L17b/4299/145. Late Chalcolithic (Period VA). Straight-necked jar with biconical body; wall of neck is slightly swollen; HM; black fabric with medium grit inclusions; fired to a pale grey brown 10YR 5/1.5 or pale brown 10YR 6/3 all over; smoke-blackened on shoulder, and patch on the lower body; lightly smoothed all over.
7. L17b/4244/18. Late Chalcolithic (Period VA). Long-necked jar with a pair of loop handles set above the shoulder; HM; dark grey brown 10YR 3/1 fabric, tending towards black, with medium grit inclusions; exterior is black and well burnished except for the shoulder which is red brown 2.5YR 4/4; interior is smoothed and mostly smoke blackened except around the neck which is a pale yellowish grey 10YR 5/3.
8. L17b/4295/134. Late Chalcolithic (Period VA). Cup with curved profile; HM; grey brown 10YR 4/1 fabric with medium grit inclusions and occasional coarse piece; exterior is burnished and mottled brown 10YR 4.5/4 and black; interior is plain grey.

Figure 7

1. M17/3770/65. Late Chalcolithic (Period VA). Deep bowl; off-set swelling neck; small loop handle at the neck juncture; HM; laminated section, the inner surface was scored to bond with outer layer; a refined fabric with very fine grits and a few voids; the core reveals the contrasting colour scheme of the surface — a red burnished interior and a lustrous, black burnished exterior.
2. L17b/4299/149. Late Chalcolithic (Period VA). Jar rim fragment; HM; black fabric with medium grit inclusions; exterior is black burnished except for narrow strip of brown 7.5YR 5/4 along one edge; interior is black and smoothed.
3. M16-M17/3763/38. Late Chalcolithic (Period VA). Deep bowl; scars from two, ovoid-sectioned loop handles from neck to shoulder; partly reconstructed; HM; early drab ware; the core is pale brown to dark grey N4/; very fine golden mica, a moderate amount of medium mixed gritty inclusions and some voids in the paste; smoothed reddish yellow 7.5YR 8/6 surfaces, not burnished; mottled from use as a cooking pot
4. M16/3766/57. Late Chalcolithic (Period VA). Large open bowl fragment; off-set and everted rim; carinated profile; a small solid tab handle survives at the rim; HM; sandwich core from reddish yellow 7.5YR 8/6 interior to very dark grey

N3/ exterior; a moderate amount of fine to small mixed gritty inclusions in the paste; smoothed interior and burnished exterior

Figure 8

1. L17b/4253/46. Late Chalcolithic (Period VA). Decorated body fragment with handle attached above the shoulder; HM; fabric has medium grit inclusions with occasional coarse piece and fired to two contrasting colours — black on the exterior, red brown 5YR 5/4 on the interior; the exterior surface is burnished, the interior is smoothed; design comprises tendrils in bold relief emanating from the base of the handle, and a band of finely incised zigzags
2. M17/3773/68. Late Chalcolithic (Period VA). Fragments from a large closed jar; HM; eroded interior surface; layered section; friable fabric with voids and fine mixed gritty inclusions; black-burnished exterior; strong brown 7.5YR 5/6 interior.
3. L17d/M17c/4223/24. Late Chalcolithic (Period VA). Body fragment with solid knob; HM; friable, sandy fabric, slightly gritty to touch; moderate amount of mixed grit inclusions and some voids; dark 10YR 3/1 core baking red 7.5YR 5/4 near the surface; exterior is dark 5Y 2.5/1 and highly burnished; interior is drab 10YR 4/1 and smoothed.
4. M17/3773/68. Late Chalcolithic (Period VA). Body sherd from a large closed jar; HM; elaborate geometric design incised after firing on the exterior with traces of white in-fill; compact fabric with medium to large mixed gritty inclusions and some voids; brown 7.5YR 5/3 interior; black exterior.
5. L17/4301/3. Late Chalcolithic (Period VA). Small, shallow bowl with solid lug handle attached to the rim; HM; plain, pale brown 10YR 7/4, lumpy fabric with a dark grey inner core; medium grit inclusions; smoke patch at the base of the exterior.
6. L17b/4295/134. Late Chalcolithic (Period VA). Bowl with slightly incurving rim; HM; relatively hard brown 10YR 5/4 fabric with medium grit inclusions; very few voids; brown and lightly burnished all over; slightly abraded on the exterior; black smoke patch around the solid knob that is set under the rim.

Figure 9

1. L17b/4250/39. Late Chalcolithic (Period VA). Lid; HM; dark brown to black coarse fabric with medium-coarse grit inclusions, with the occasional very coarse piece; no voids; top surface is burnished mottled red-brown 5YR 5/4 and grey 7.5YR 5/1, smoke blackened around the edges; the underneath surface is similar, except for a greater amount of smoke blackening.
2. L17d/M17c/4224/27. Late Chalcolithic (Period VA). Lid fragment; HM; compact, crisp fabric with voids and some fine grit inclusions; both surfaces are highly burnished, the upper is grey brown 2.5Y 5/2, whereas the lower is black.
3. L17b/4299/139. Late Chalcolithic (Period VA). Lid fragment; HM; brown fabric 7.5YR 5/4 with medium-coarse grit inclusions; brown burnished lower surface; dark grey 2.5Y 4/1 burnished upper surface; part of the geometric grooved design is preserved.

Figure 10

1. L17b/4244/28. Late Chalcolithic (Period VA). Twin-horned andiron; HM; greyish brown to pale brown smoothed surface; dowel hole near the back edge for manoeuvrability.
2. L17b/4293/133. Late Chalcolithic (Period VA). Hearth prop; HM; very coarse brown 10YR 4/3 fabric with large grit inclusions; badly burnt and cracked; smoke blackened around all the edges.

Figure 11

L17b/4299/141. Late Chalcolithic (Period VA). Twin-horned andiron; HM; pale red brown 7.5YR 6/6 all over, except around one of the horns which is pale grey 2.5Y 6/2; smoothed to lightly burnished all over, including base; very little trace of smoke blackening.

Figure 12

1. M16/3752/3. Late Chalcolithic (Period VA). Tray; HM; hard, compact fabric with medium mixed grit inclusions fired to a red brown 2.5 YR 5/8; dark grey inner core; plain on both surfaces; very rough base; smoke-blackened patch on exterior.
2. L17d/4229/33. Late Chalcolithic (Period VA). Tray fragment; HM; friable fabric with moderate amount of small to medium mixed grit inclusions; some voids; dark 10YR 4/2 core; surfaces 10YR 3/1 are possibly self-slipped and smoothed, almost burnished; rim has a squared profile, but clearly distorted when viewed from the top, perhaps deliberately incurved; very rough base possibly reed-wiped.
3. L17d/M17c/4215/13. Late Chalcolithic (Period VA). Base fragment of tray; HM; friable 7.5YR 5/4 fabric with a large amount of mixed semi-coarse grit inclusions, similar to river gravel; drab 10YR 5/2 smoothed surface.
4. M17/3766/49. Late Chalcolithic (Period VA). Tray with low scooped front; near vertical walls; flat rough base possibly formed on matting; HM; friable drab ware; medium-textured core, graded in colour from grey N6/, through light red 5R 7/6, to red 2.5YR 6/6; moderate amount of voids and small to medium mixed gritty inclusions; thick matt, light red 2.5YR 7/6 slip on both sides that is crazed and eroding.
5. L17d/M17c/4226/30. Late Chalcolithic (Period VA). Pedestal base fragment; HM; fairly crude, friable, drab N3/ (gley) fabric with numerous voids and medium to very large grit inclusions; straw-wiped all over.
6. L17b/4299/139. Late Chalcolithic (Period VA). Holemouth jar fragments; HM; black fabric with medium grit inclusions fired to a red brown 2.5YR 5/6 colour; smoothed to lightly burnished surfaces.

Figure 13

1. L17b/4299/142. Late Chalcolithic (Period VA). Rim fragment; HM; section reveals contrasting colours — pale brown 7.5YR 6/4 on the interior, black on the

exterior; medium to semi-coarse grit inclusions; smoke blackened, lightly burnished exterior, smoothed interior.

2. L17b/4299/149. Late Chalcolithic (Period VA). Rim fragment with loop handle linking neck to shoulder; HM; originally fired to a pale red brown 7.5YR 6/4, now the exterior is smoke blackened; core reveals both colours; surfaces are smoothed all over.
3. L17b/4253/46. Late Chalcolithic (Period VA). Fragment of straight-necked jar with large loop handles linking neck to shoulder; HM; relatively thin-walled with pronounced, everted rim; compact fabric with medium to semi-coarse grit inclusions; core reveals contrasting colour of surfaces — plain red brown 2.5YR 5/5 on the interior and a black burnished exterior; part of high relief design (spirals?) emanating from the base of handle.
4. M17/3755/30. Late Chalcolithic (Period VA). Deep bowl with carinated profile; a pair of flattened knob lugs with central shallow depression are set opposite each other at the juncture of neck and shoulder; HM; coil technique of manufacture is evident in section; heat-damaged and friable paste with a moderate amount of fine to medium mixed grit inclusions, and a few voids; core colour is uneven with the interior half about 5YR 7/6 and the exterior mostly black; the interior surface is slipped and smoothed, whereas the exterior, though originally burnished, is now badly eroded.

Figure 14

1. M17/3734/1259. Early Bronze Age I (Period VB). Small straight-necked jar with biconical body; HM; fairly compact black fabric with fine to medium grit inclusions; well burnished black exterior; slipped in buff on the interior surface which is smoothed except for a lightly burnished inner lip; decorated with a solid pellet attached to the carination — originally there were probably two equidistantly placed — and three (originally four) dimples, also equidistant from each other, just above the carination.
2. M16/M17/3727/91. Early Bronze Age I (Period VB). Small jar with an accentuated girth; HM; black fabric with medium white grit inclusions; black to dark brown-grey 10YR 4/3 burnished exterior; plain brown 5YR 4.5/4 interior, smoke blackened in parts; a groove defines the juncture of neck and body.
3. M16/N16/3645/10A. Early Bronze Age II (Period VC). Rim fragment of jar; HM; crisp, well levigated fabric with a moderate amount of fine to medium mixed grit inclusions; beautifully finished grey N6/ to N5/ burnished exterior surface with a conspicuous silver sheen around the neck; interior is grey and smoothed.
4. M16/N16/3645/10A. Early Bronze Age II (Period VC). Small jar with accentuated girth and thick wall; HM; dark fabric with occasional fine grit visible in abrasions; exterior is highly black burnished; interior is plain and dark 10YR 7/4 in colour; top of rim is very flat; base is quite rough.
5. M16/N16/3645/12. Early Bronze Age II (Period VC). Jar; HM; black burnished exterior; smoothed, pale red brown 7.5YR 5/3 interior, which is also smoke blackened; section reveals the same contrast of colours, with red brown tending towards 2.5YR 5/6; medium white grit inclusions.
6. L16d/1816/39A. Middle Bronze Age II (Period IVB). Jar with accentuated girth; HM; black burnished exterior; interior surface is plain brown 7.5YR 7/4

- and its base has been thickly lined with clay that is packed down roughly; dark core 2.5Y 4/1 with some voids and fine to medium grit inclusions, mainly white.
7. L16/4161/71. Middle Bronze Age I (Period IVA). Deep bowl; off-set neck and everted rim; three evenly spaced dimples on the shoulder; HM; medium-textured, compact brown 7.5YR 5/4 fabric with a moderate amount of mixed gritty inclusions; some rim abrasions and cracked wall; decayed interior from use as a cooking pot; dark grey 7.5YR 4/2 burnished exterior and inner rim; plain reddish yellow 7.5YR 8/6 interior. A small patch of a tar-like material remains of an ancient mend.
 8. L16/4138/17. Middle Bronze Age I (Period IVA). Bowl with triangular-profiled rim; HM; fairly compact black fabric with medium mixed grit inclusions and a consistent colour throughout; highly burnished exterior, smoothed dark grey 7.5YR 4/1 interior.

Figure 15

M17/3755/29. Late Chalcolithic (Period VA). Andiron fragments; HM; shallow depressions on the top of the sides and the back dips; flat front surfaces; shallow ledge around lower inner wall; rough base; coarse fabric with voids and fine to medium mixed gritty inclusions; mottled, matt, reddish yellow 5YR 7/6 slipped surface from heat damage; grey N4/ core, baking reddish yellow 5YR 6/6.

Figure 16

1. L16/4133/32. Middle Bronze Age I (Period IVA). Deep bowl with accentuated girth, and a sharp profile in the lower half; HM; black fabric firing to a dark greyish brown 7.5YR 5/3 on the interior; tempered with medium white grit inclusions; well burnished on the exterior; plain, rough interior.
2. L16/4133/11. Middle Bronze Age I (Period IVA). Tray fragment with elaborate relief decoration on the exterior; laminated core; black fabric with medium mostly white gritty inclusions; baking red-brown 5YR 5/4 on the interior surface and over the lip; burnished exterior surface; rough plain interior.
3. L16/4144/41. Middle Bronze Age I (Period IVA). Deep bowl with thickened belly; everted, flat rim suggests that bowl was inverted immediately after manufacture and pressed; triangular lug at the rim; flat base; restored; HM; friable interior from use as a cooking pot; dark greyish brown 7.5YR 4/1 to black core; a moderate amount of mixed fine gritty inclusions and some voids; slipped plain grey brown 7.5YR 4/2 interior; thickly slipped and burnished, red-brown 10YR 3/2 exterior.

Figure 17

L16/4161/68. Artifact no. 3406. Middle Bronze Age I (Period IVA). Twin-horned andiron with dowel hole near the back edge (1.6 cm deep); base is formed into a shallow tray; slightly blackened on the flat side from use; complete; thickly slipped light brown 7.5YR 6/4 and smoothed surface.

Figure 18

1. L16/4138/17. Middle Bronze Age I (Period IVA). Deep hemispherical bowl with a thick, irregular ledge handle attached to the rim; HM; black fabric with distinctive medium white grit inclusions; baked to a greyish red brown 7.5YR 5/2 colour on the interior; exterior is mostly black with a patch of red brown 7.5YR 5/4; both surfaces are burnished.
2. L16/4117/215A. Middle Bronze Age II (Period IVB). Deep bowl with incurving rim; HM; black, well burnished exterior; interior surface is fired to red brown 2.5YR 4/4 and burnished in a hatched pattern; core reveals white grit inclusions and a similar contrasting colour scheme, though the interior is closer to brown 10YR 5/2.
3. L16/4140/27. Middle Bronze Age I (Period IVA). Lid with a bevelled edge and central depression; HM; black fabric with medium grit inclusions; colour is fairly even throughout; top surface is black burnished, whereas the underneath is plain brown 10YR 4/1.5 except for the edge which has been smoke blackened.
4. J14/1293/103. Iron Age I (Period IIA). Lower half of a jar; WM; black compact fabric with fine to semi-medium grit inclusions and the occasional mica specks; fired to a dark brownish grey 7.5YR 4/1 in the upper half, smoke-blackened around the base; wheel striations evident on the interior wall; horizontal grooving above the shoulder.

Figure 19

1. L17b/4244/27. Late Chalcolithic (Period VA). Bone point; excellent condition; high polish at the tip and high points; diagonal scratches around the tip.
2. M16/M15d/3725/72. Early Bronze Age I (Period VB). Diorite stone hammer (?) with shaft hole; no sign of wear; both surfaces are flat.
3. M16/3718. Early Bronze Age I (Period VB). Bone point with signs of polish around tip.
4. M16/M15d/3715/30. Early Bronze Age I (Period VB). Intact bone point with fire hardened tip; high sheen along the shank from use; some sheen on the knobbed end.
5. M17/3750/42. Early Bronze Age I (Period VB). Bronze needle broken in two halves; reasonably fine condition with intact eye.
6. M16d/N16c. Early Bronze Age I (Period VB). Modified ceramic disk; smoothed edges; black burnished exterior; brown 7.5YR 5/3 burnished interior; section clearly reveals the two contrasting colours.

Figure 20

1. L16c/4079/113. Middle Bronze Age II (Period IVB). Tanged antler projectile point; intact and very fine example.
2. L16/4140/21. Middle Bronze Age I (Period IVA). Tanged antler projectile point; smoothed on one side; minimal use wear sheen; found in two halves.
3. L16d/1822/59. Middle Bronze Age II (Period IVB). Bone spatula.

Figure 21

1. LI6C/4049/14. Middle Bronze Age II (Period IVB). Damaged point; some sheen toward the tip; drilled through the top.
2. LI6C/4050/15. Middle Bronze Age II (Period IVB). Bone needle.
3. LI6C/4051/17. Middle Bronze Age II (Period IVB). Bone needle.
4. M16d/N16C/3641/3. Early Bronze Age III (Period VD). Ceramic animal figurine; bovine; missing head; very dark 5Y 4/-3/1 clay.
5. M16d/N16C/3641/2. Early Bronze Age III (Period VD). Ceramic animal figurine; bovine; complete apart from horn tips; fabric colour is 10YR 6/2.
6. LI6C/4051/17. Middle Bronze Age II (Period IVB). Bone needle.
7. LI6d/1815/34. Middle Bronze Age II (Period IVB). Ceramic wheel; hole pierced through central shaft; surface is smoothed though crazed in parts; surface colour is mottled; core is 2.5Y 5/2.

Figure 22

1. LI6/4122/223. Middle Bronze Age I (Period IVA). Bone spindle whorl; intact; no sheen on domed side; straight central hole; dark colour may indicate fire hardening.
2. J14/1263/25. Iron Age II (Period IIB). Bone spindle whorl; intact; some sheen around the central hole; darkened by fire on the top.
3. J14/1288/45. Iron Age I (Period IIA). Ceramic wheel; broken; friable clay with laminations, voids and medium to large grit inclusions; matt surface 7.5YR 5/4.

Figure 23

1. LI7b/4248/37. Late Chalcolithic (Period VA). White flint triangular bead; three centre-dot circles decorate one side; four angled thread holes perforate the body.
2. LI7d/M17C/4214/2. Late Chalcolithic (Period VA). White flint, square bead; slightly burnt; three thread holes run through the longitudinal section; another three very small holes are drilled through the transverse section.
3. LI7b/4248/40. Late Chalcolithic (Period VA). White flint, slightly irregular lozenge-shaped bead; two parallel thread holes perforate the body.
4. M16/M17/3724/77. Early Bronze Age I (Period VB). White flint short bead tending towards a truncate bicone shape; perforated through the centre.
5. LI6/4098/152. Middle Bronze Age II (Period IVB). White flint truncated bicone short bead; perforated through the centre.
6. LI6/4108/168. Middle Bronze Age II (Period IVB). White flint, truncated bicone disc; perforated through the centre.
7. LI6C/4065/55. Middle Bronze Age II (Period IVB). Eroded faience bead, nothing left of the glaze; originally the shape was probably truncated short bicone; perforated through the centre.

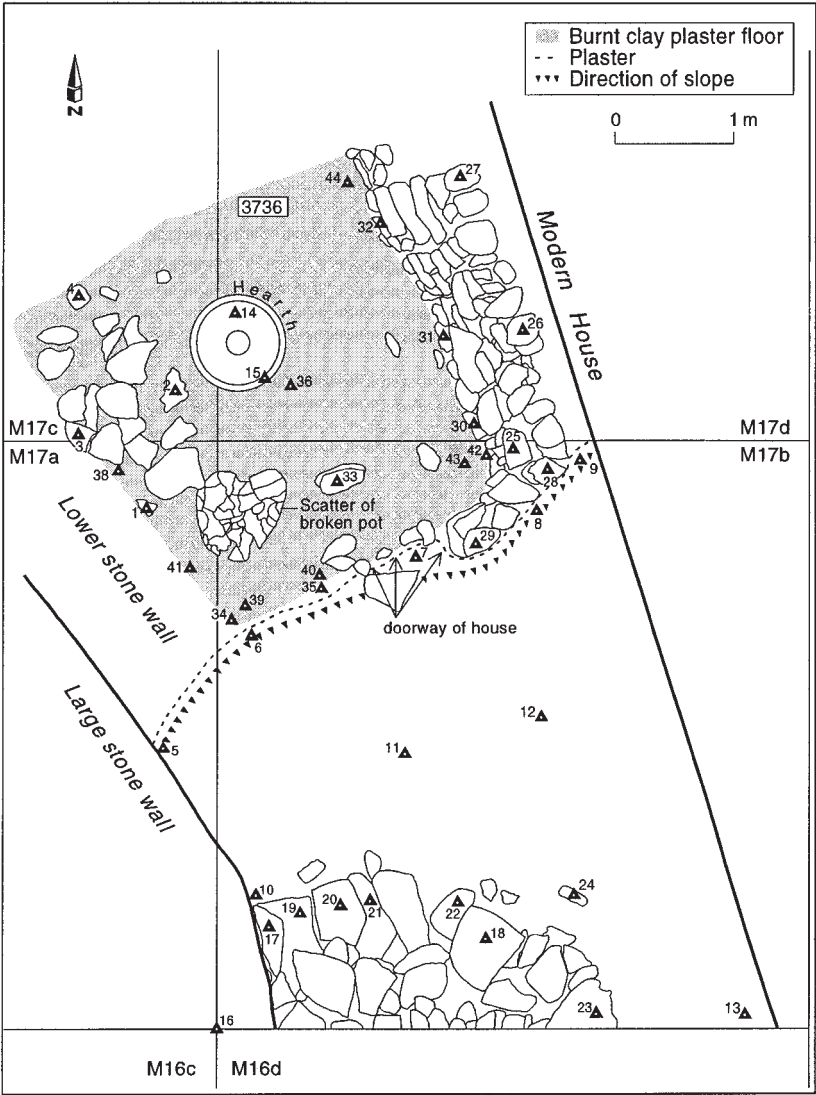


Fig. 1. Early Bronze Age I (Period VB) house, Trench M17.

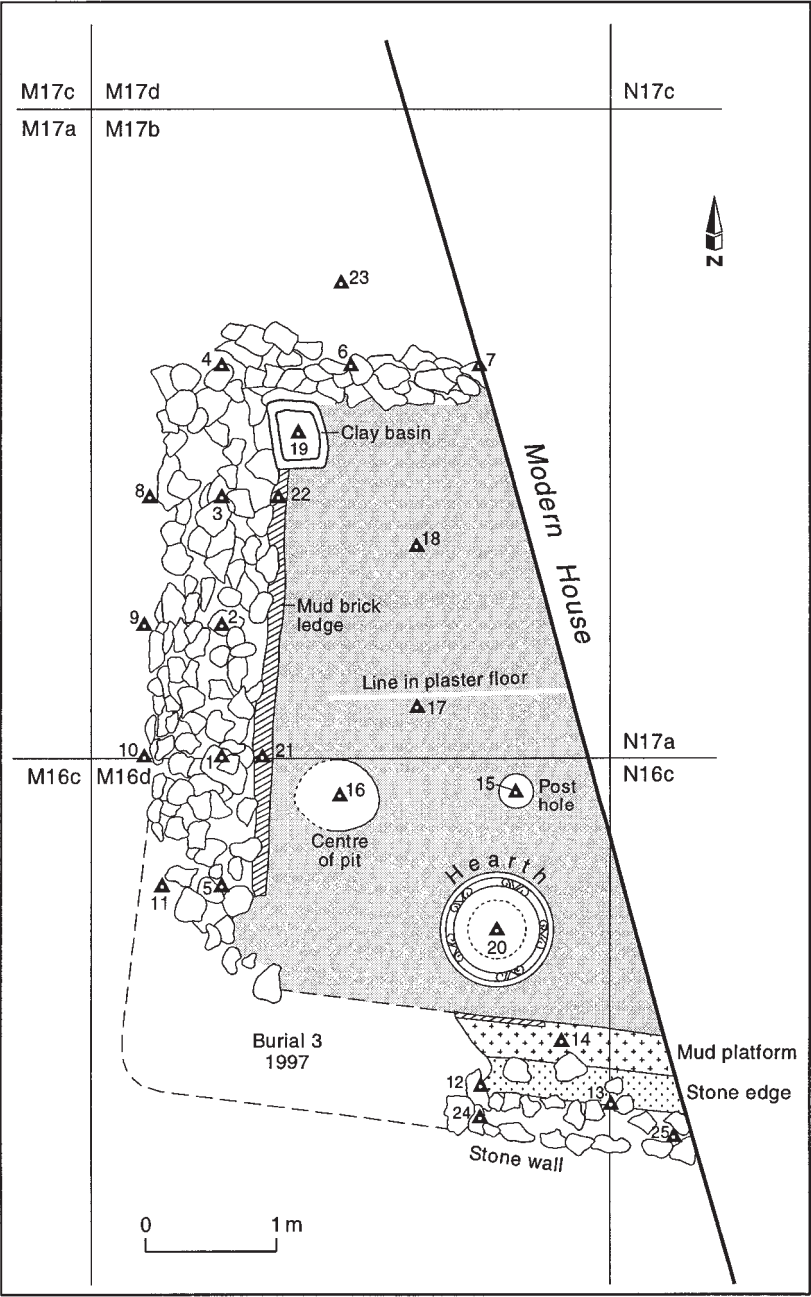


Fig. 2. Early Bronze Age II (Period VC) house, Trench M16/N16.

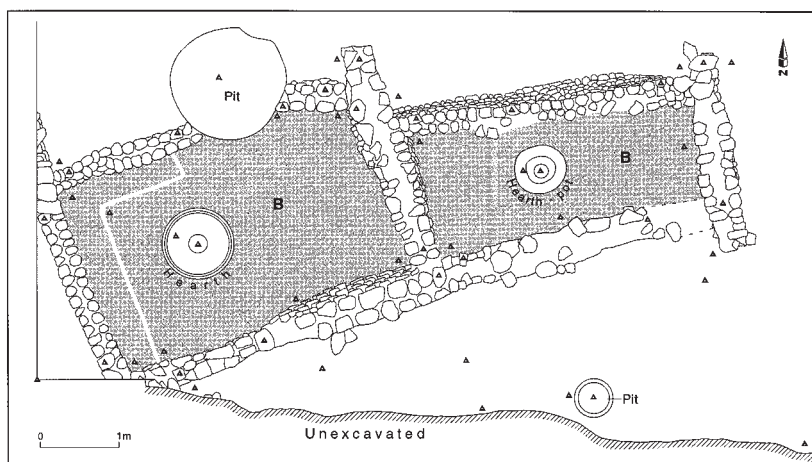


Fig. 3. Middle Bronze Age I (Period IVA) house, Trench L16

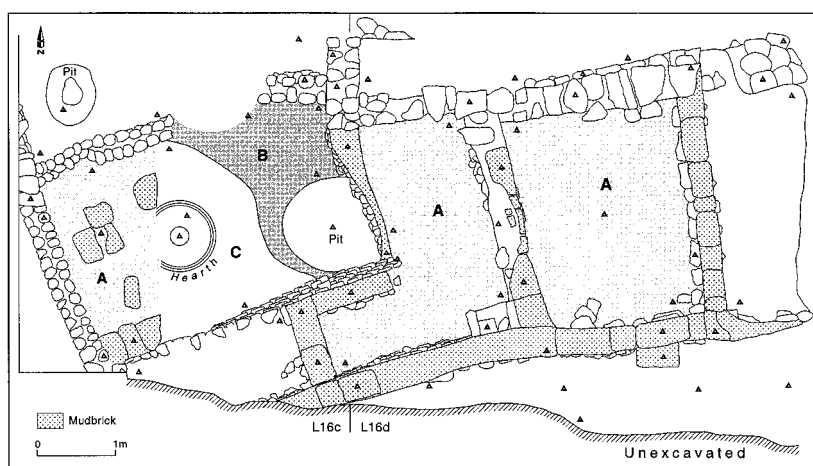


Fig. 4. Isometric plan showing three floors levels in Trench L16: A—Middle Bronze Age II (Period IVB) house; B— Middle Bronze Age I (Period IVA) thin plaster floor and pits; C— Middle Bronze Age I (Period IVA) house.

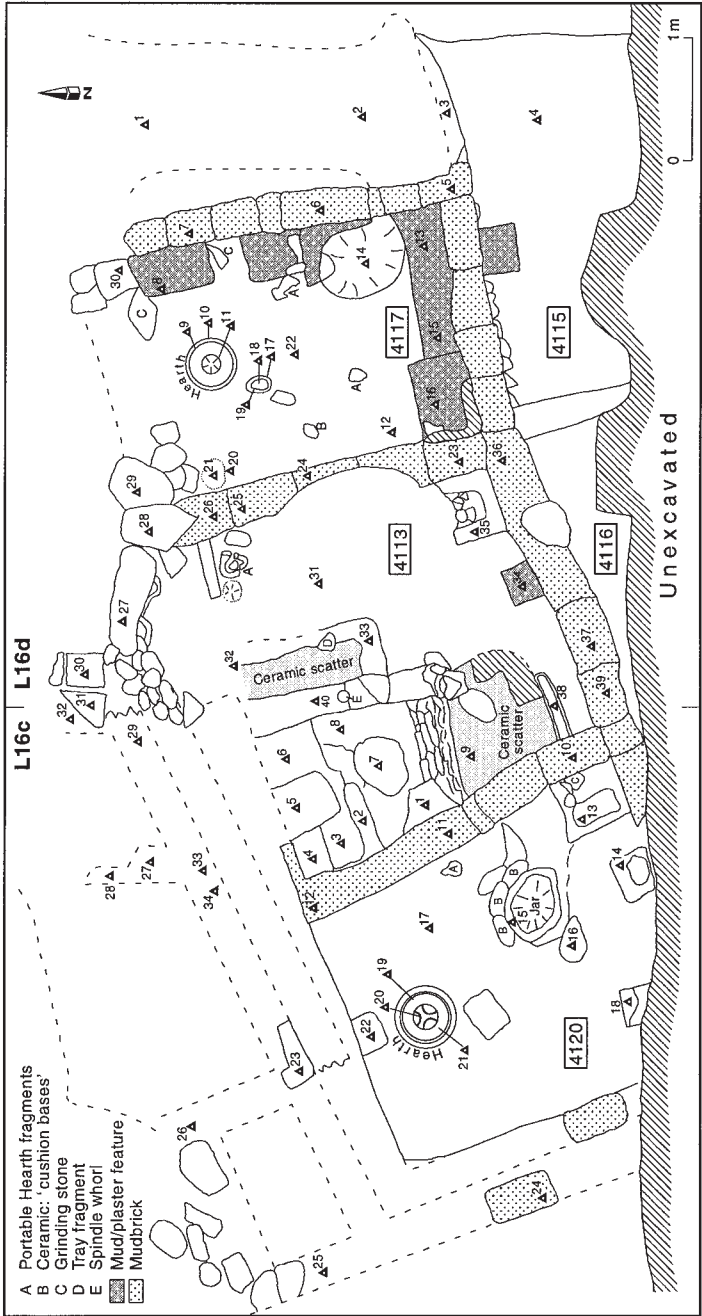


Fig. 5. Middle Bronze Age II (Period IVB) house, Trench L16

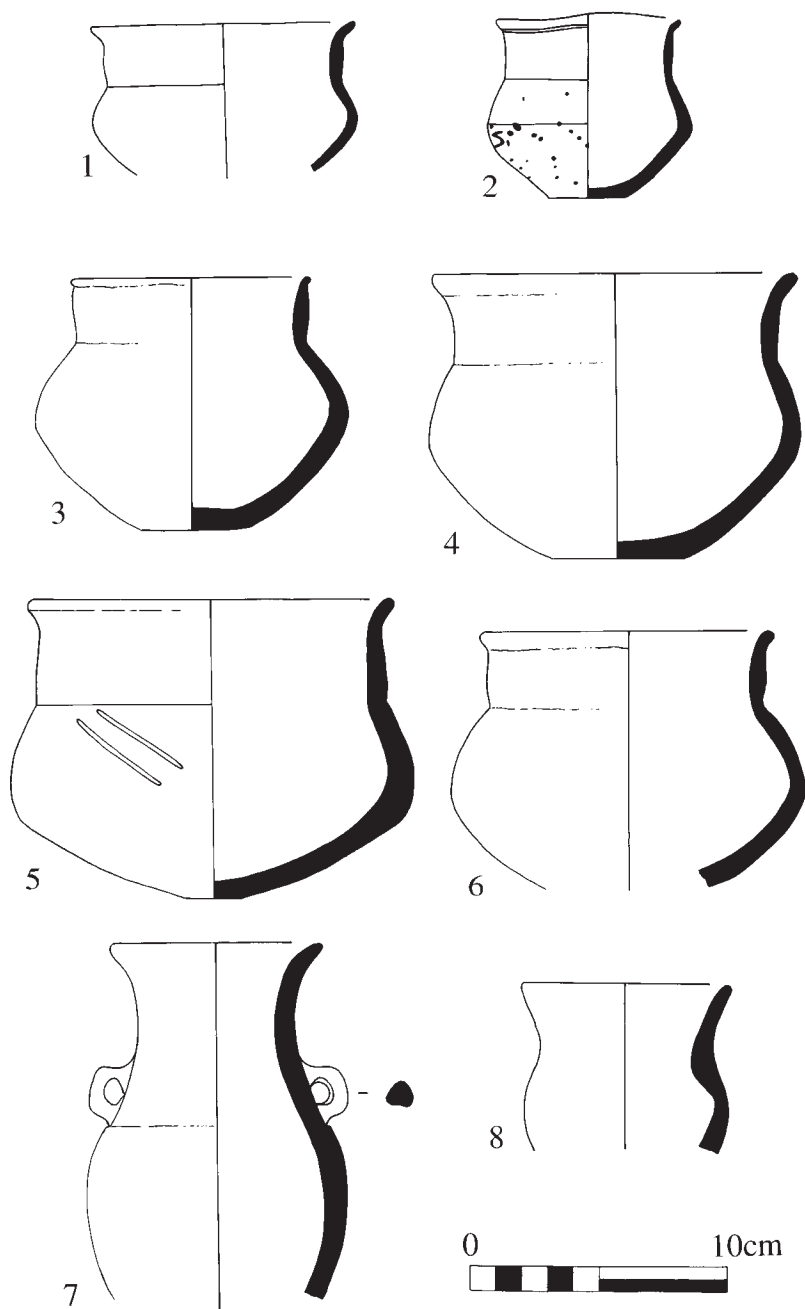


Fig. 6.

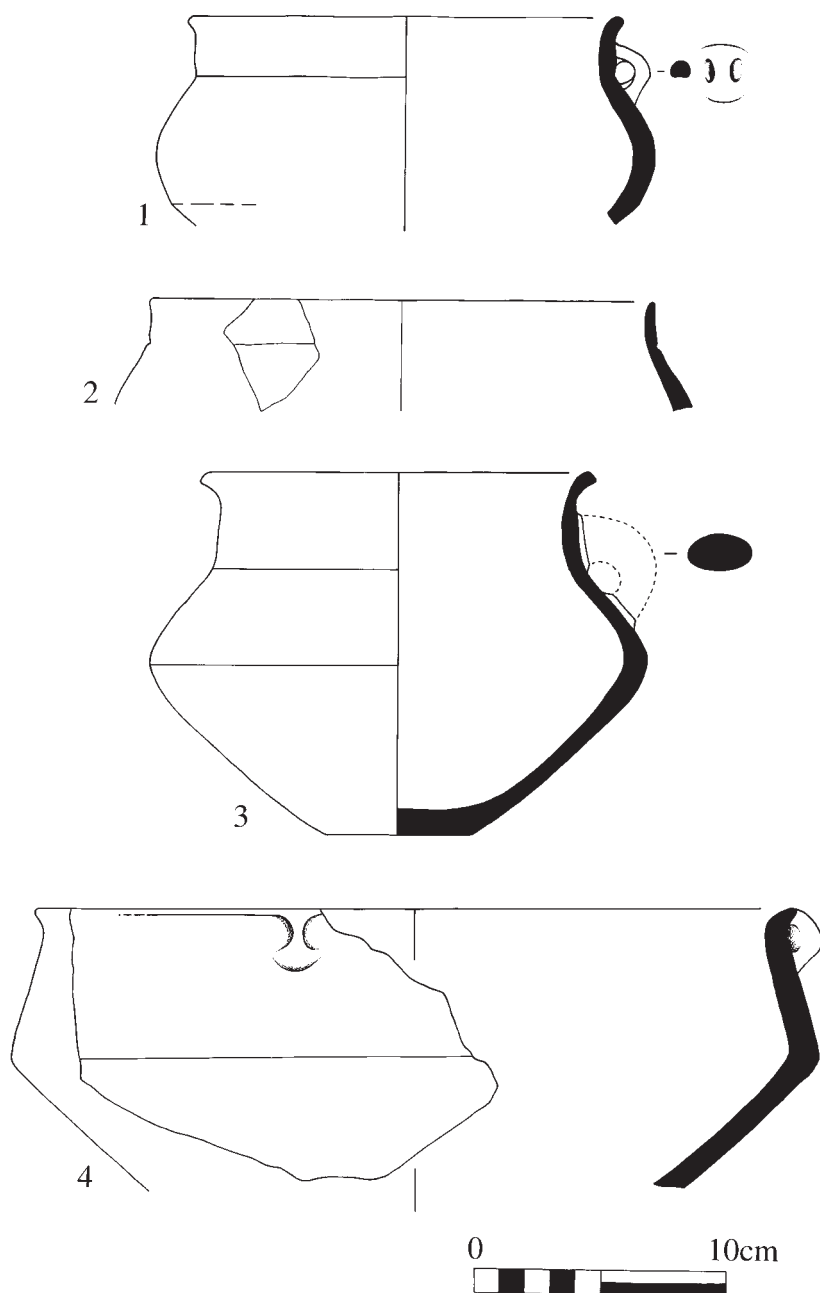


Fig. 7.

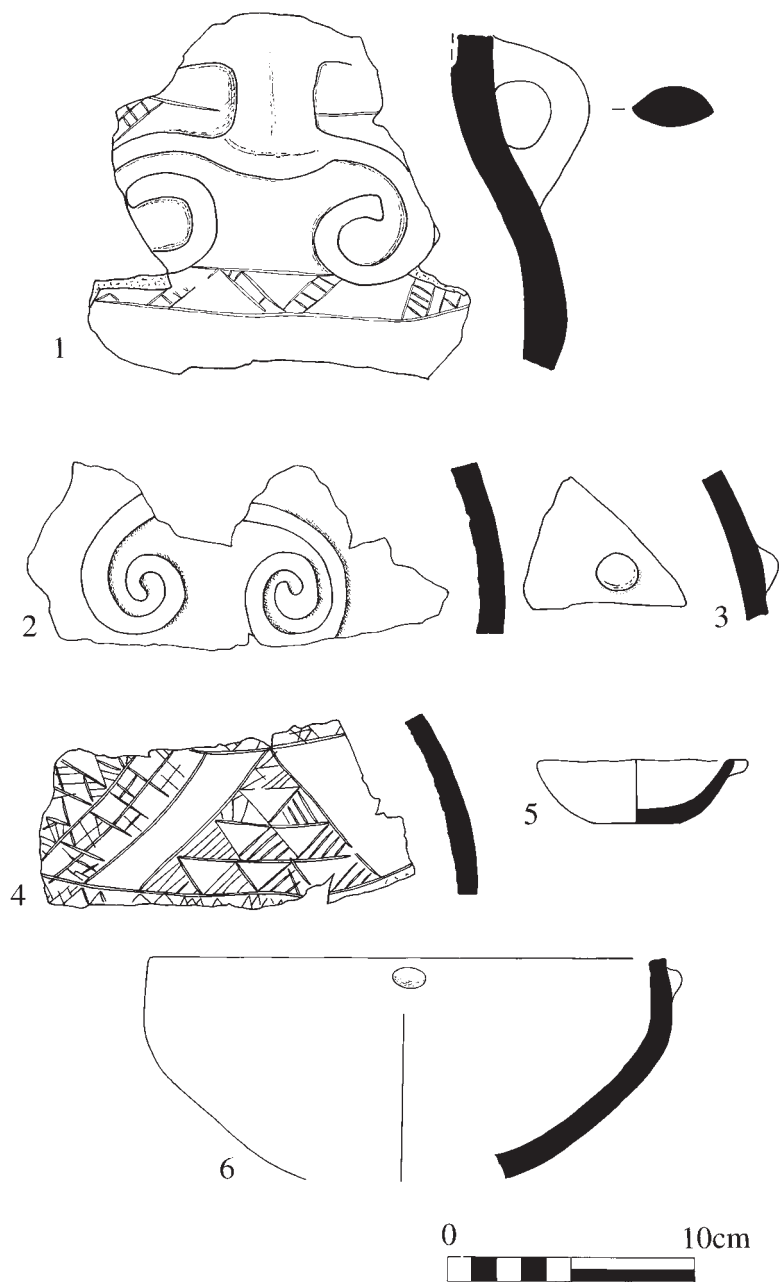


Fig. 8.

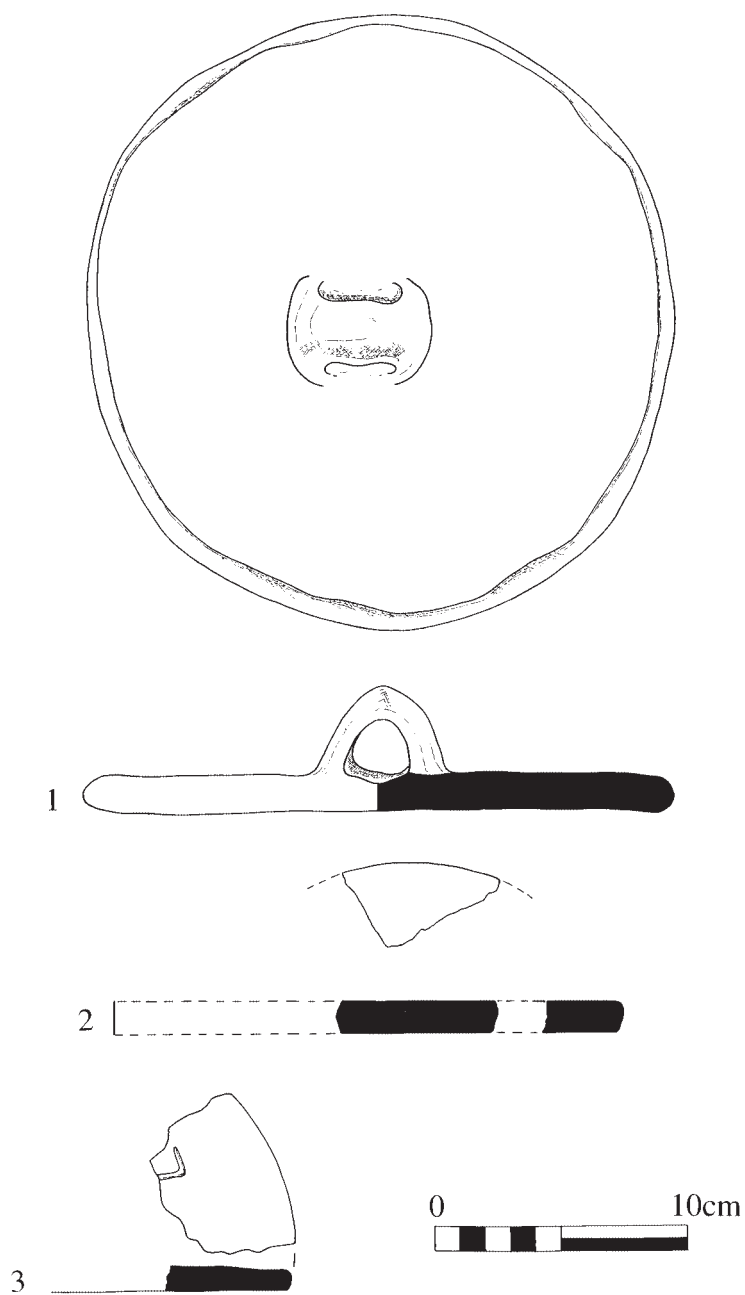


Fig. 9.

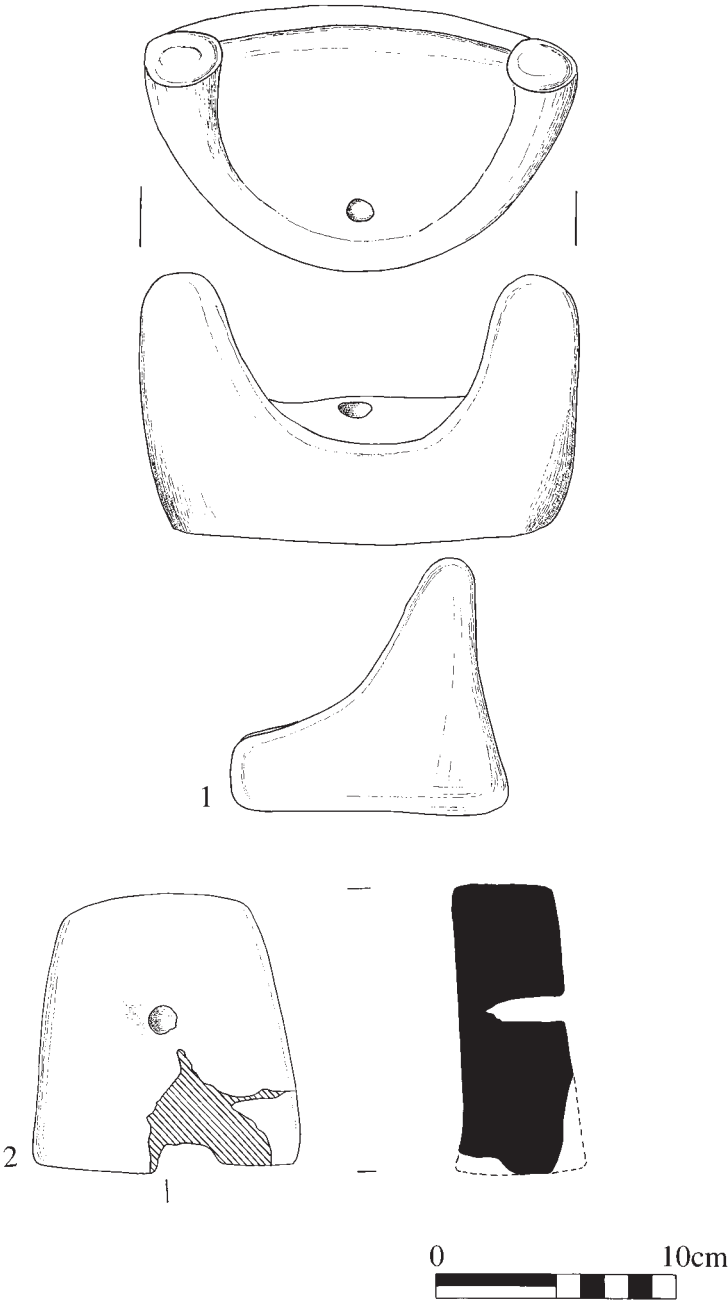


Fig. 10.

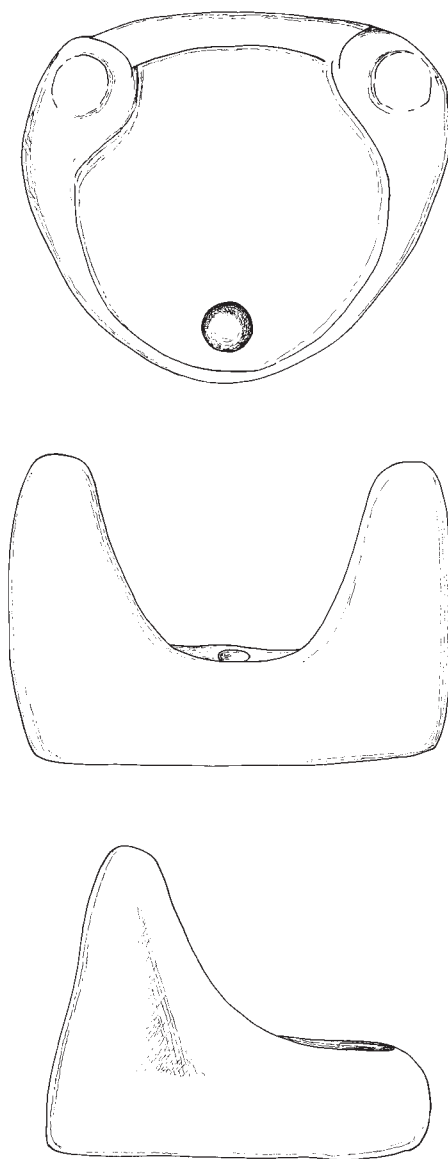


Fig. II.

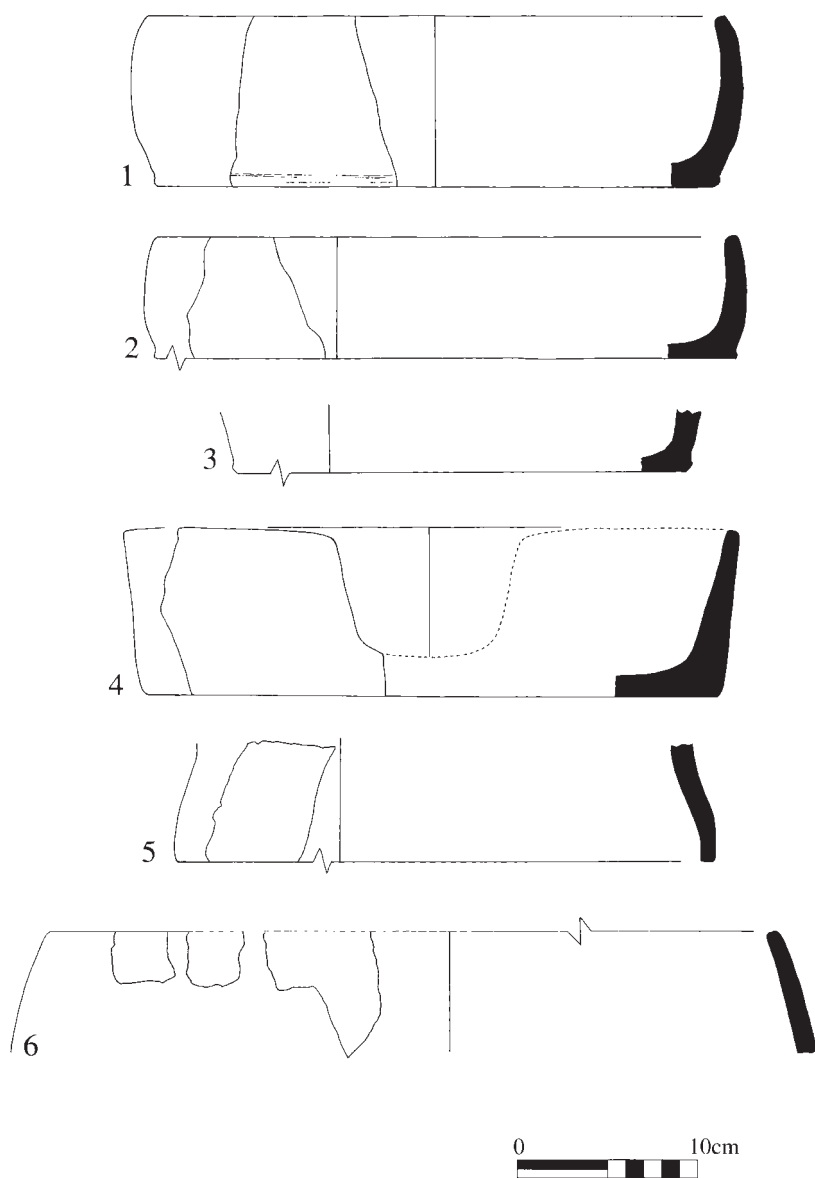


Fig. 12.

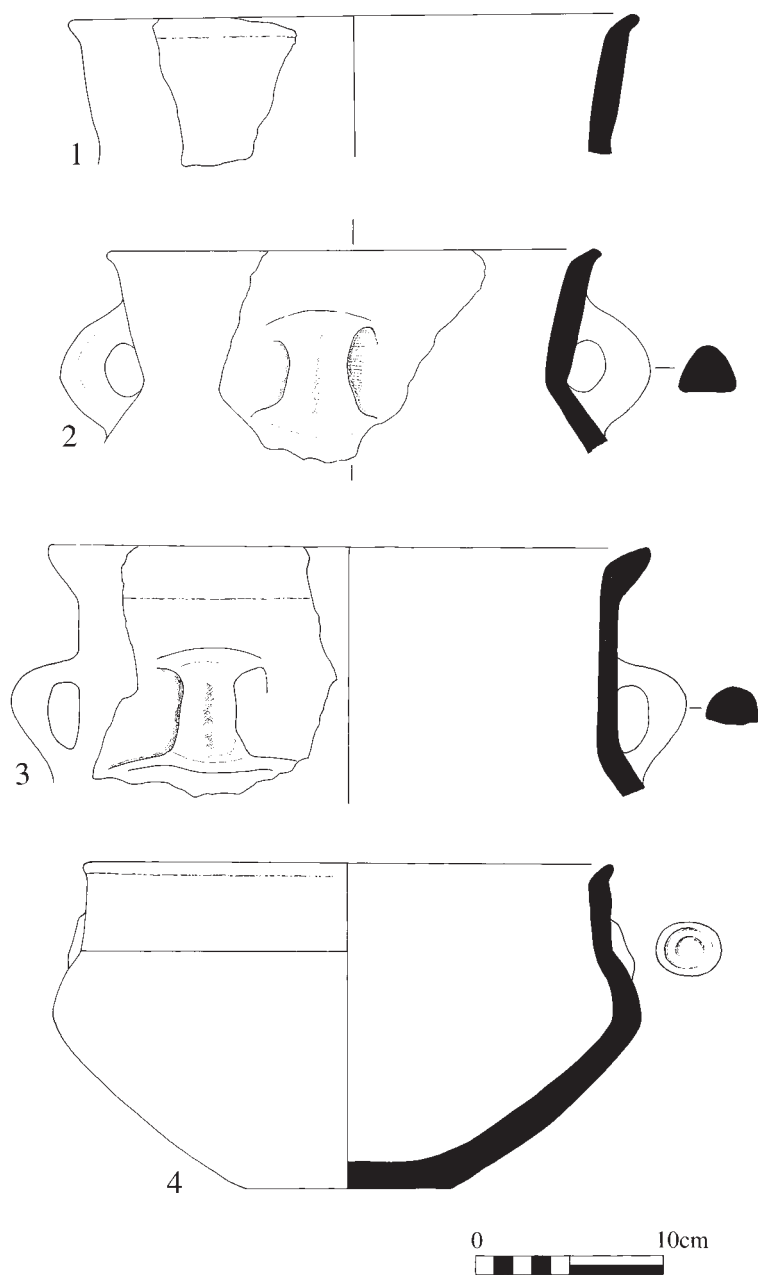


Fig. 13.

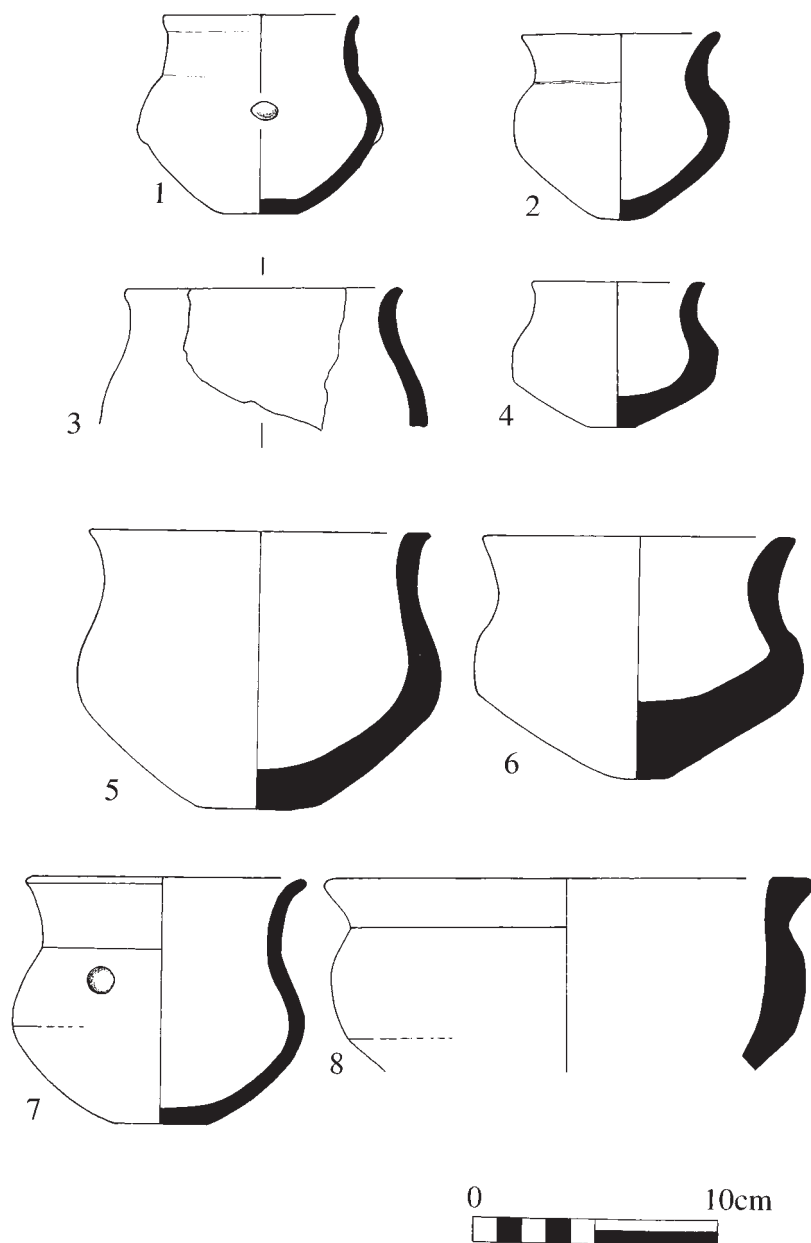


Fig. 14.

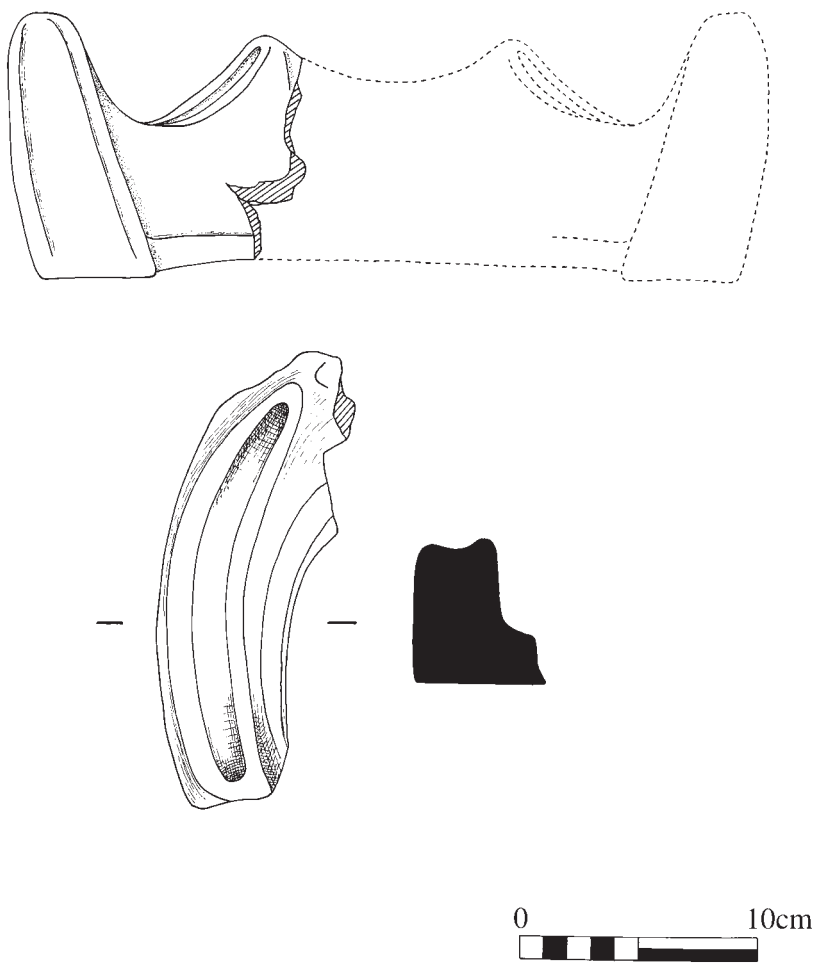


Fig. 15.

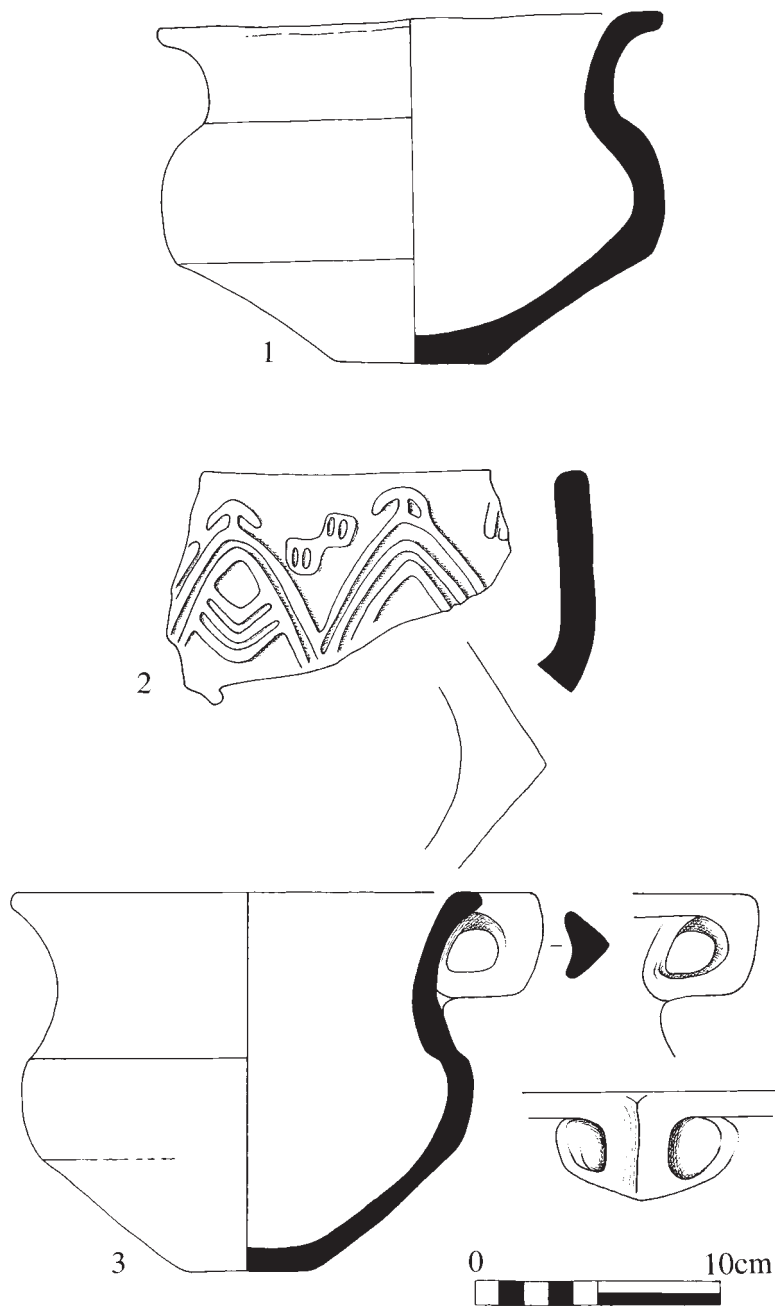


Fig. 16.

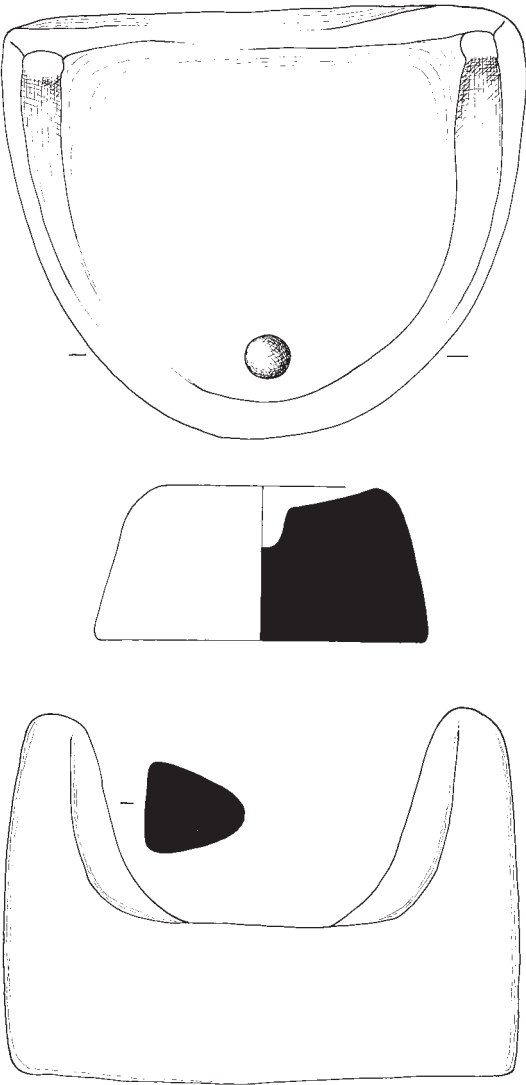


Fig. 17.

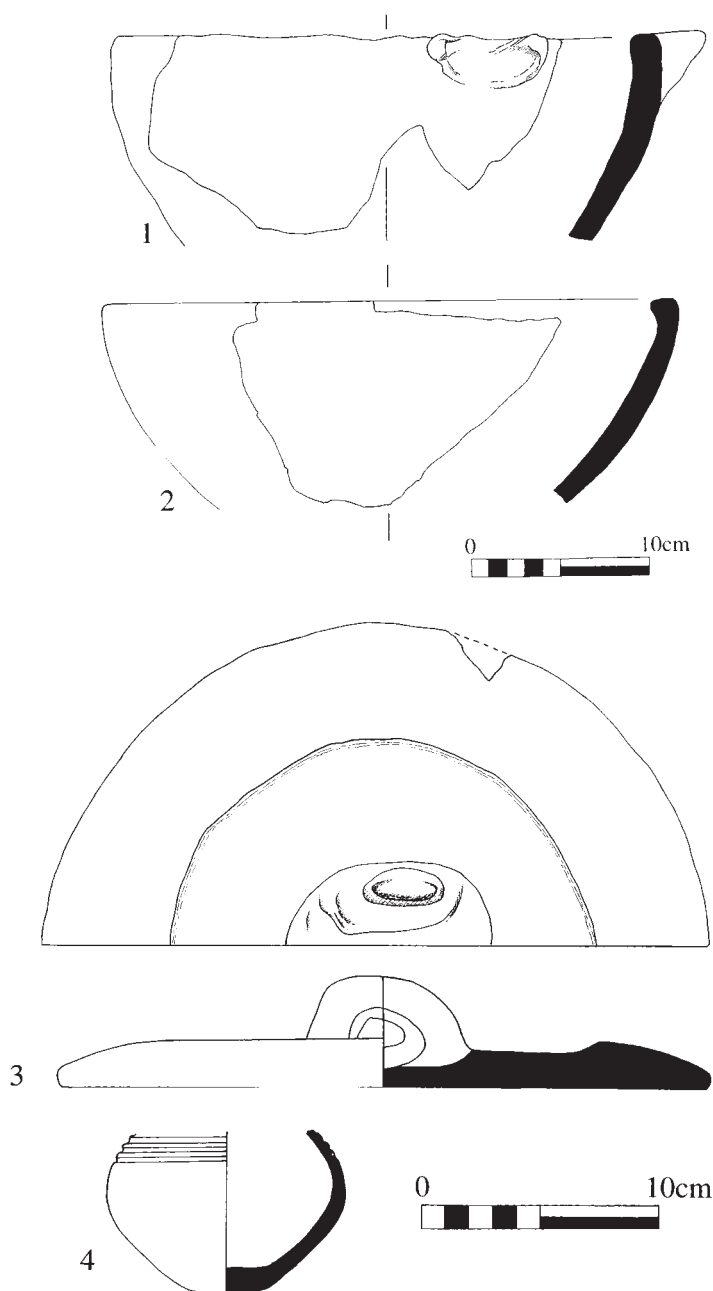


Fig. 18.

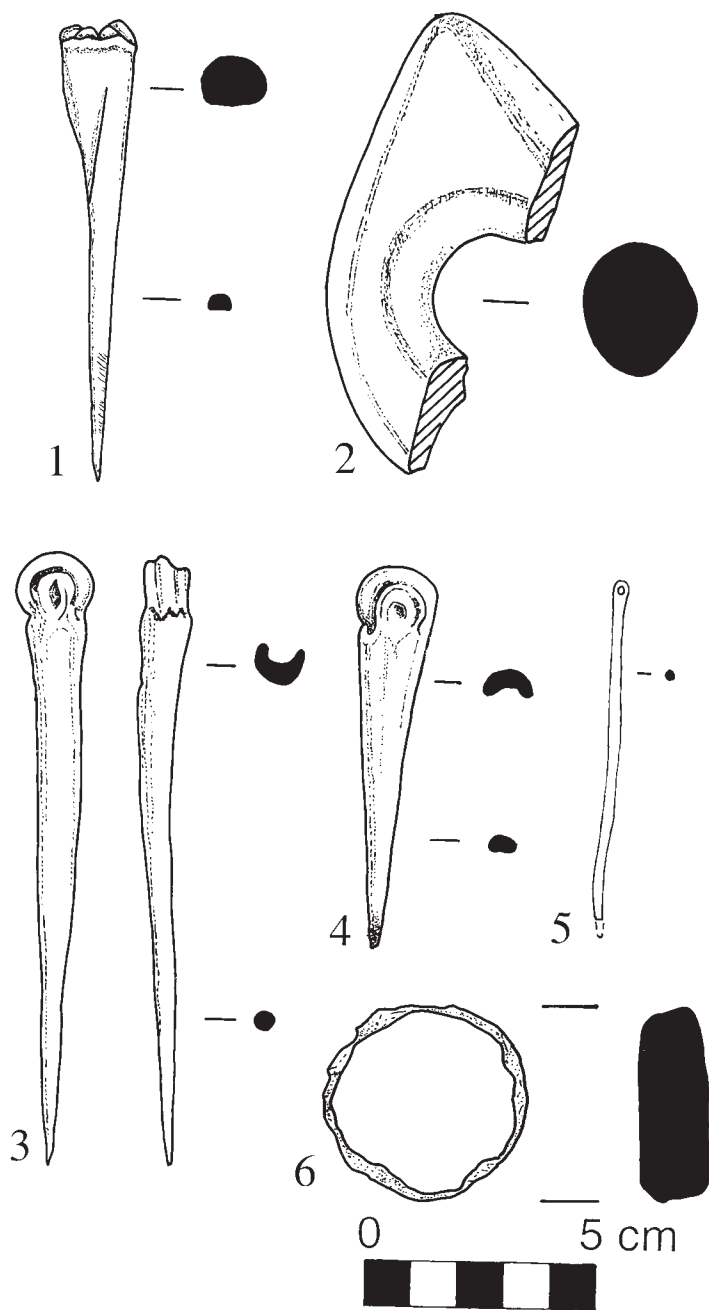


Fig. 19.

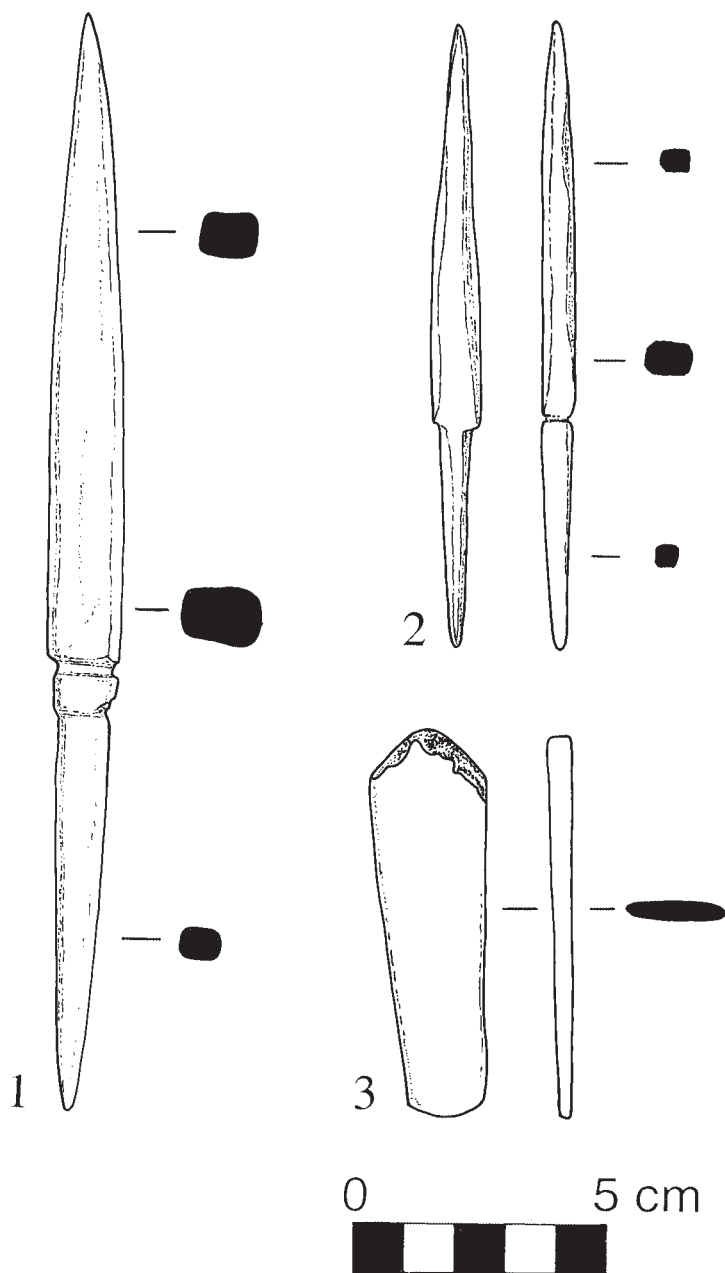


Fig. 20.

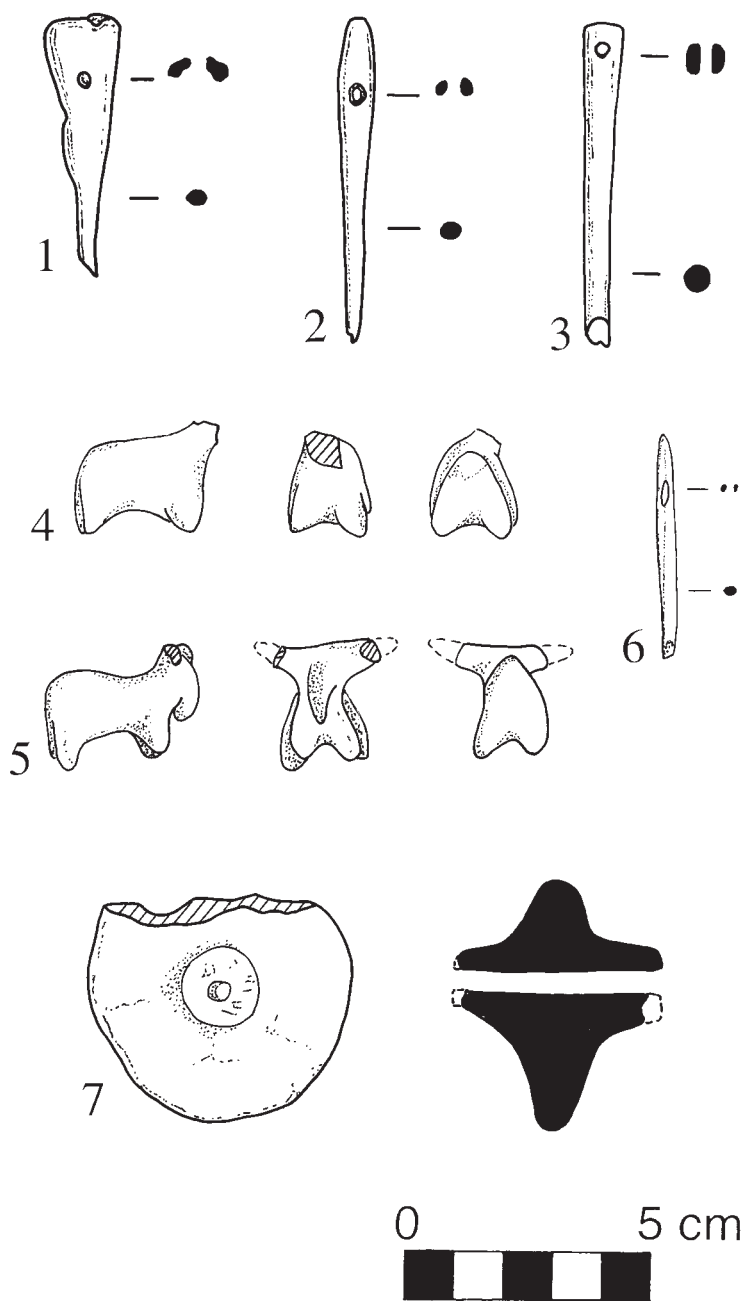


Fig. 21.

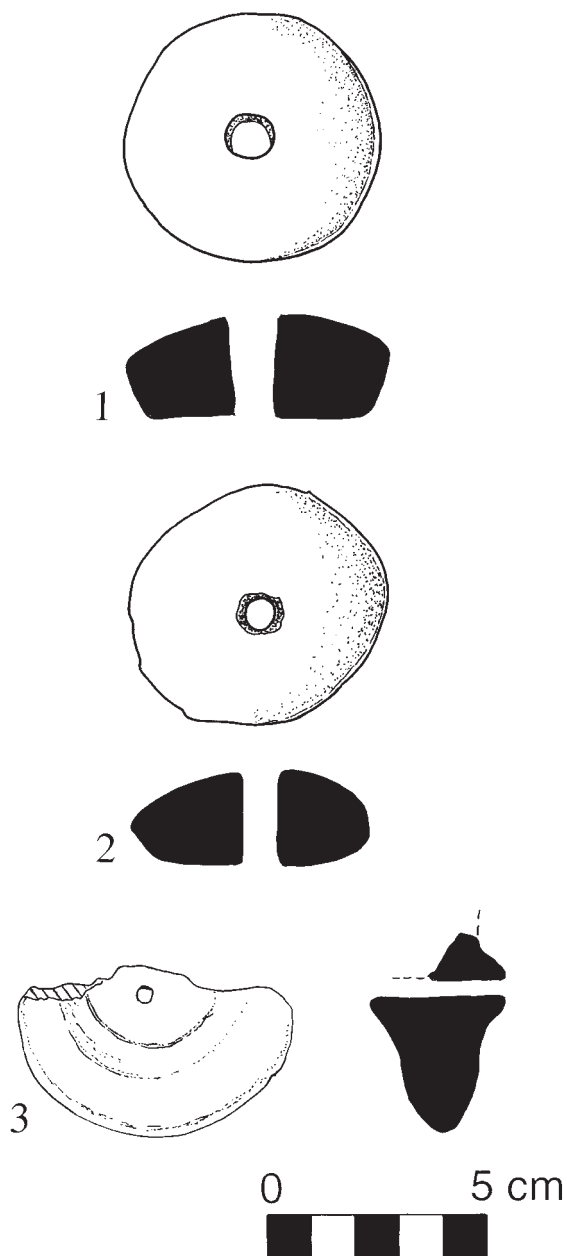


Fig. 22.

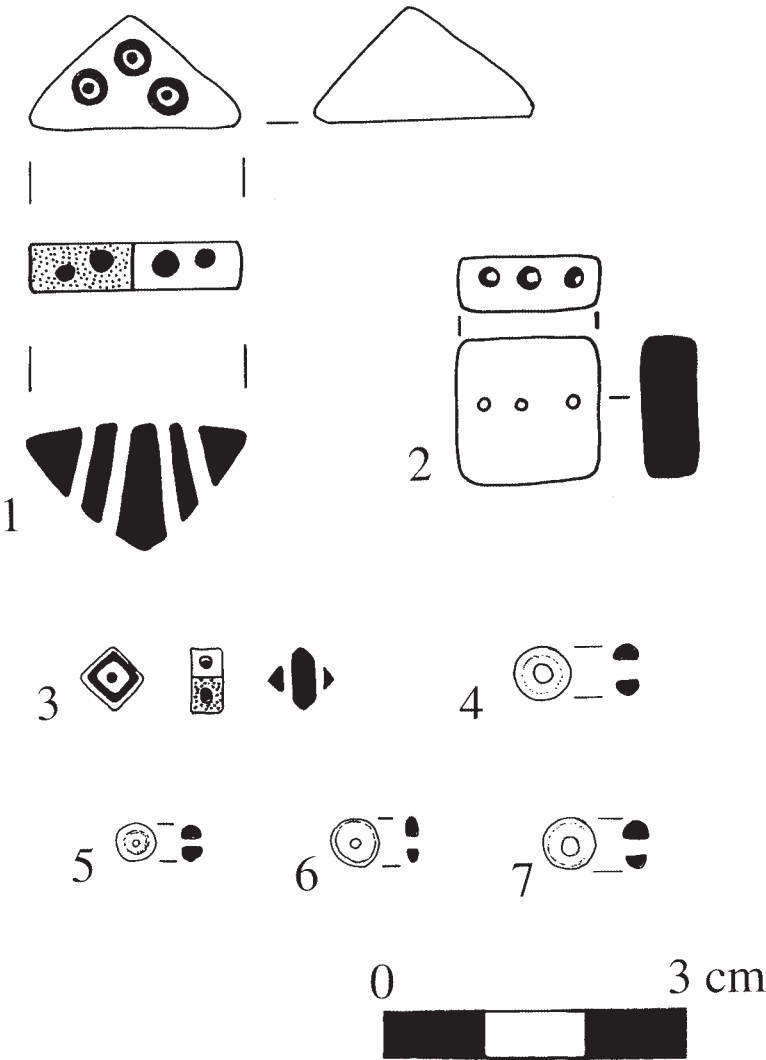


Fig. 23.



Fig. 24. South section of the northern operation taken in 1999.



Fig. 25. Late Chalcolithic (Period VA) twin-horned andiron found in the exploratory trench opened in 1998. L17d/M17c, Locus 4215, Basket 13.

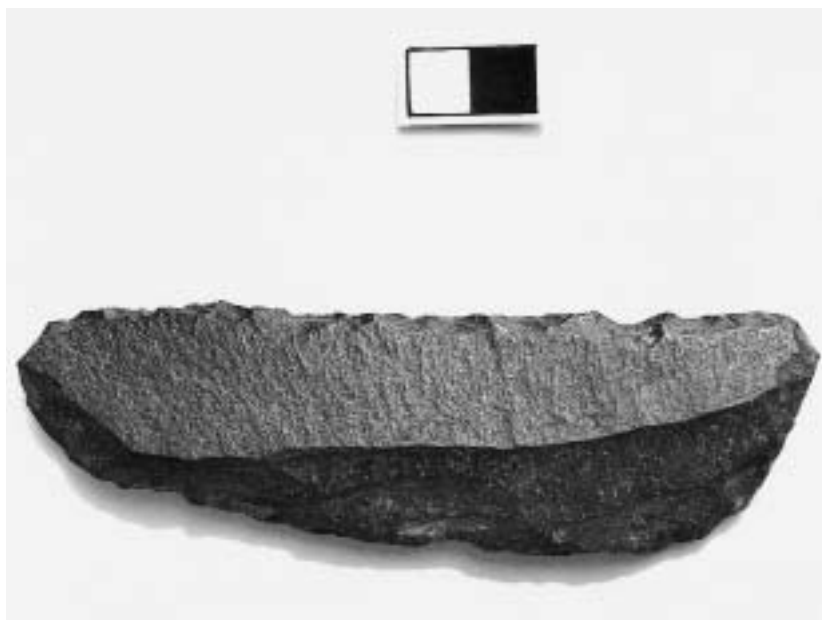


Fig. 26. Late Chalcolithic (Period VA) stone blade showing use wear sheen along a retouched edge. L17d/M17c, Locus 4216, Basket 10.



Fig. 27. Late Chalcolithic (Period VA) stone wall in trenches M17/M16, showing an interior stone revetment. The room on the left is situated at a higher level in Trench L16 and belongs to the Middle Bronze Age (Period IVB).



Fig. 28. Late Chalcolithic (Period VA) stone wall in trenches M17/M16 showing the exterior lobe attachment; looking north. The pit on the left belongs to a Middle Bronze Age shaft grave of the Trialeti tradition that cut through the wall.



Fig. 29. Late Chalcolithic (Period VA) twin-horned portable hearth.
L17b, Locus 4299, Basket 141, Object 46.



Fig. 30. Late Chalcolithic (Period VA) floor with built-in circular hearth, ceramic vessel and two portable hearth props, in bottom left hand corner. M17, Locus 3768.



Fig. 31. Late Chalcolithic (Period VA) dwelling located at the edge of the mound. Hearth comprises a platform with modified ceramic vessel surrounded by stones that are beginning to appear. M16, Locus 3755.



Fig. 32. Late Chalcolithic (Period VA) floor constructed with pottery sherds that had been purposefully crushed on a layer of river sand (*kum*) shortly after the wall collapsed. L17b, Locus 4270; excavated in 1999.



Fig. 33. A section through the Late Chalcolithic (Period VA) monumental stone wall revealed the 'ceramic' floor sandwiched between two building layers. The large stones above the sherds belong to the second re-building phase. L17, Locus 4316; excavated 2000.



Fig. 34. Reconstructed Late Chalcolithic (Period VA) circular hearth.
L17b, Locus 4269; Basket 81.



Fig. 35. Late Chalcolithic (Period VA) circular house with round hearth positioned in the centre of the floor. Lr7b, Locus 4250. A pit dug shortly after the house was abandoned is seen in the lower half.



Fig. 36. Interior (eastern) face of Late Chalcolithic (Period VA) monumental stone wall showing the juncture between the rebuilt section, on the left hand side, and the original face, on the right hand side. Looking north.



Fig. 37. Interior (eastern) face of Late Chalcolithic (Period VA) monumental stone wall showing the juncture between the rebuilt section, on the left hand side, and the original face, on the right hand side.

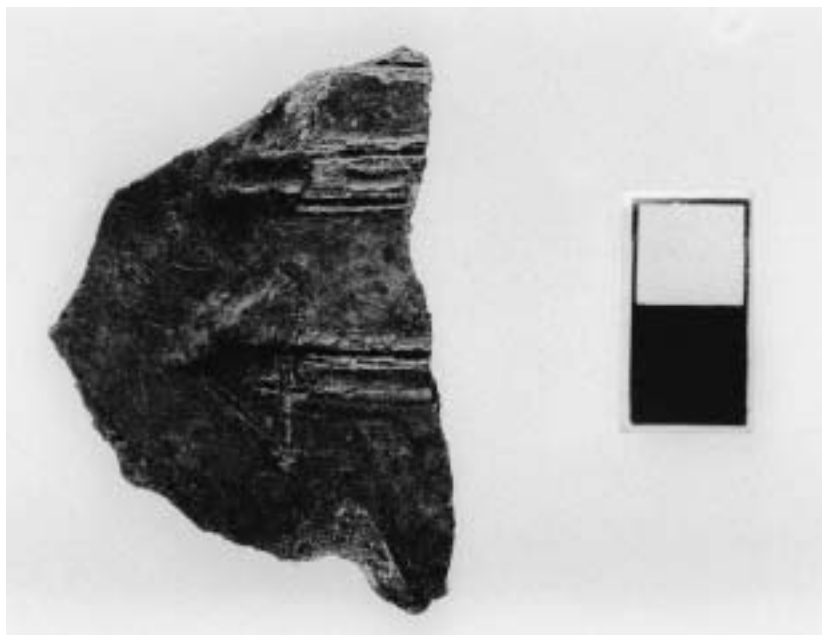


Fig. 38. Late Chalcolithic (Period VA) fragment of a Kura-Araxes vessel showing the technique used to create a relief decoration. L17b, Locus 4239, Basket 4a.



Fig. 39. Early Bronze Age I (Period VB) dwelling located at the edge of the mound.
M17, Locus 3736.



Fig. 40. Early Bronze Age I (Period VB) hearth constructed in two halves with central bowl. Part of the surface is decorated with a geometric incised design.
M16/M17, Locus 3726, Basket 84.

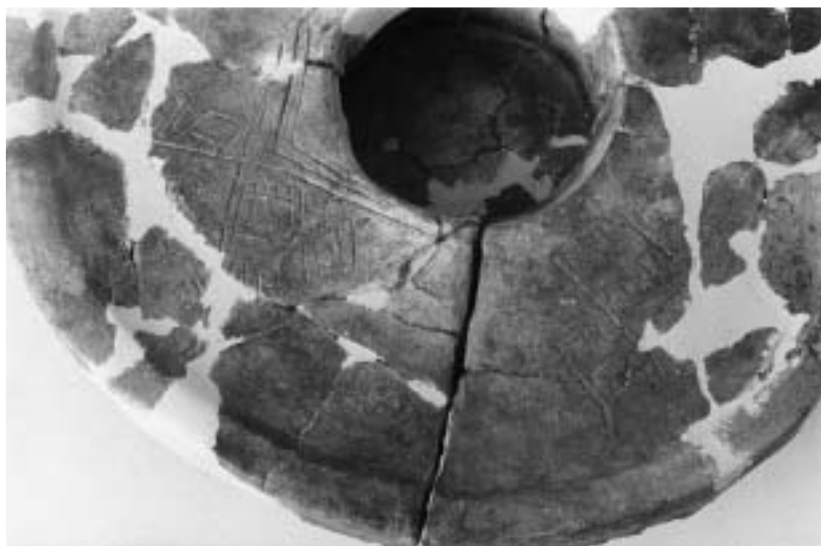


Fig. 41. Detail of the decorated Early Bronze Age I (Period VB) hearth.
M16/M17, Locus 3726, Basket 84.



Fig. 42. Upper half of a large red-and-black burnished Early Bronze Age I (Period VB)
storage jar with grooved pattern. M16/M15d, Locus 3733, Basket 107.



Fig. 43. Lower half of a large red-and-black burnished Early Bronze Age I (Period VB) storage jar with grooved pattern. M16/M15d, Locus 3733, Basket 107.

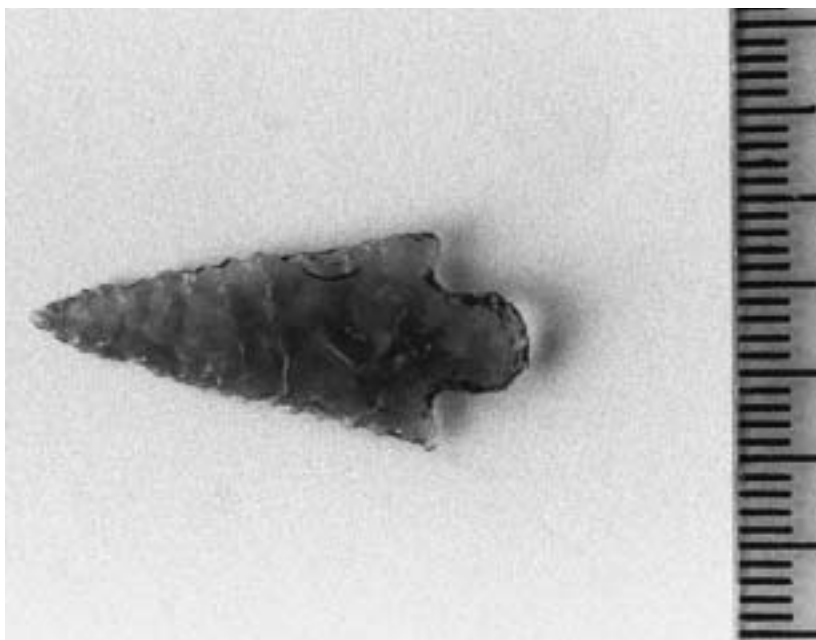


Fig. 44. Early Bronze Age I (Period VB) obsidian projectile point. M16/M15d, Locus 3715, Basket 30, Object 6.



Fig. 45. Early Bronze Age I (Period VB) obsidian blade. Artifact 2776.



Fig. 46. Early Bronze Age II (Period VC) house. The south-west corner was destroyed in the subsequent period with a grave was dug. M16/N16, Locus 3645.



Fig. 47. Detail of Early Bronze Age II (Period VC) hearth showing relief double-spiral design.



Fig. 48. Early Bronze Age III (Period VD) ceramic crucible.
Top view. L17, Locus 4302, Basket 4, Object 3.



Fig. 49. Early Bronze Age III (Period VD) ceramic crucible.
Side view. L17, Locus 4302, Basket 4, Object 3.



Fig. 50. Middle Bronze Age I (Period IVA)
structure with a cobble-based foundation. Looking west.



Fig. 51. Stratigraphic section showing Middle Bronze Age I (Period IVA) cobble foundations superimposed by foundations of larger field stones of the Middle Bronze Age II (Period IVB) period.

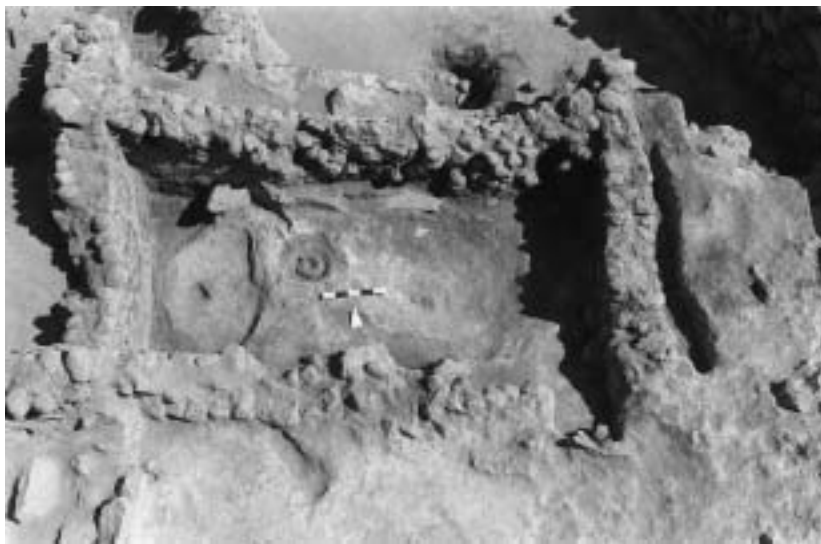


Fig. 52. Middle Bronze Age I (Period IVA) room with central hearth constructed from a ceramic vessel. L16, Locus 4144.



Fig. 53. Middle Bronze Age II (Period IVB) building, Trench L16.



Fig. 54. Middle Bronze Age II (Period IVB) building, looking east.



Fig. 55. Middle Bronze Age II (Period IVB) red-brown burnished hearth with central three projections. The hearth was sunken into the floor up to the rim.
L16, Locus 4120, Basket 218.



Fig. 56. Kura-Araxes Late Gritty ware found in a trash pit of the Middle Bronze II (Period VB) period.



Fig. 57. Middle Bronze Age II (Period VB). Perforated antler mace head; two of the three branches appear to be fire-hardened. Artifact 3360.



Fig. 58. Middle Bronze Age II (Period IVB) plaster-lined pit at the centre of which is an inverted black burnished bowl. L16d, Locus 1816.



Fig. 59. Middle Bronze Age II (Period IVB) burial in Trench L16d.



Fig. 60. Iron Age I (Period IIA) carbonized beam *in situ*. J14, Locus 1263.



Fig. 61. Iron Age I (Period IIA) carbonized basketry. J14, Locus 1293, Basket 105.



Fig. 62. Iron Age I (Period IIA) carbonized furniture fragment. J14, Locus 1293, Basket 105, Object 128.



Fig. 63. Iron Age I (Period IIA) carbonized basketry. J14, Locus 1287, Basket 90, Sample 257.

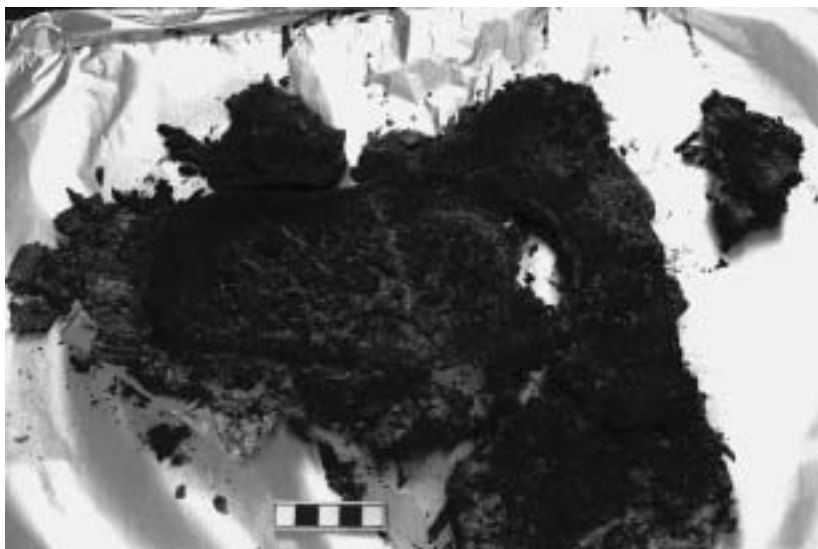


Fig. 64. Iron Age I (Period IIA) carbonized, twire sandal and the heel of another. J14, Locus 1299.



Fig. 65. Iron Age I (Period IIA) *askos* filled with oil seeds.

Obsidian from Volcanic Sequences and Recent Alluvial Deposits, Erzurum District, North-Eastern Anatolia: Chemical Characterisation and Archaeological Implications

Peter V. BRENNAN

Centre for Classics and Archaeology
School of Fine Arts, Classical Studies and Archaeology
University of Melbourne
Victoria 3010
AUSTRALIA
Fax: (61) 3 8344 4161
E-mail: petervb@unimelb.edu.au

Abstract

Recent archaeometric research in the Erzurum district, north-eastern Anatolia, has concentrated on the characterisation of samples of obsidian collected from Neolithic and Bronze Age sites, and from potential primary and secondary sources. Geochemical characterisation using Instrumental Neutron Activation Analysis indicates that obsidian present at the archaeological sites was obtained from several sources that are chemically distinct from the major obsidian sources already known from Central Anatolia and the Lake Van area. Multiple sources are represented in the samples collected from at least three of the sites, namely the sites of Sos Höyük, Pulur, and Aşkale Höyük. The primary source of some of the obsidian utilised at the site of Sos Höyük has been located in the volcanic sequence outcropping to the north-west of Pasinler. Field survey however has shown that the alluvial deposits along the major rivers and some of their tributaries were the main sources of obsidian utilised at archaeological sites near Erzurum. Trade or exchange of obsidian with sites outside the Erzurum area seems to

*have been limited, a feature that is consistent with the emerging view that this part of north-eastern Anatolia was an independent socio-economic unit during the Bronze Age.**

An outline of the ancient cultures of the north-east Anatolian highlands is beginning to emerge. The early archaeological campaigns at the mound sites of Karaz, Güzelova and Pulus may now be re-assessed in light of the recent data from excavations at Büyüktepe Höyük (Bayburt) and Sos Höyük (Erzurum; Fig. 1) and their accompanying field surveys.¹ Among the many aims of the current University of Melbourne project is the geochemical analysis of obsidian from archaeological sites and potential sources, the results of which should improve our understanding of the procurement and distribution of this raw material in Anatolia and the Near East.

Turkish obsidian sources

Obsidian outcrops have been recorded from more than twenty localities in Turkey² although not all of these are likely to have been of archaeological significance. Previous studies have shown that obsidian sources of major archaeological importance occur in the Çiftlik and Acigöl areas in central Turkey, and at Lake Van, and Bingöl in Eastern Anatolia.³ Obsidian from these sources has been found at archaeological sites throughout the Near East, thus confirming the presence of extensive trade or exchange networks throughout the area covered by present-day Iraq, Iran and the Levant.⁴

* I wish to thank Antonio Sagona for the invitation to be involved in his archaeological project of north-eastern Anatolia, and to the Anıtlar ve Müzeler Genel Müdürlüğü, Ankara, for granting permission to carry the investigations. The project's research has been greatly facilitated by the close collaboration we have enjoyed with the staff at Erzurum Museum, and by the assistance extended to the project by the office of the *Vali* in both Bayburt and Erzurum. The project was funded by the Australian Research Council (ARC Small Grant, no. S59711361), and the Australian Institute of Nuclear Science and Engineering (grant no. 95/052). Helen Waldron at Becquerel Laboratories analysed the obsidian samples, and provided the technical details of the INAA technique described herein. This paper benefited significantly from the comments of an anonymous reviewer and Jim Specht, Australia Museum.

¹ Koşay and Turfan 1959; Koşay and Vary 1964; Koşay and Vary 1967. For early field survey of surrounding regions see Kökten 1944; Kökten 1947. For the University of Melbourne campaigns, for a time a collaborative project with Erzurum Museum, see Sagona 1989; Sagona 1991; Sagona 1992; Sagona 2000; Sagona, Pemberton and McPhee 1991; Sagona, Pemberton and McPhee 1992; Sagona, Pemberton and McPhee 1993; Sagona and Brennan 1994; Sagona, Sagona and Özkorucuklu 1995; Sagona, Erkmen, Sagona and Thomas 1996; Sagona Erkmen, Sagona and Howells 1997; Sagona 1999.

² Ercan, Şaroğlu and Kuşçu 1996.

³ Renfrew, Dixon and Cann 1968; Chataigner 1998.

⁴ Blackman, 1984.

Significant deposits of obsidian have also been reported from the volcanic sequence outcropping between Erzincan and Kars in north-eastern Anatolia.⁵ The current project is attempting to characterise the obsidian sources in the Erzurum district, and to evaluate the role of these sources in the obsidian trade during the later prehistoric periods. Of particular interest at this stage of our research is the procurement and distribution of obsidian during the third and second millennia BC, a period that broadly corresponds to the development of the Early Trans-Caucasian cultural complex.

Although this paper is primarily concerned with the characterisation of the source or sources of obsidian found at the archaeological site of Sos Höyük near Erzurum, the nature of obsidian trade or exchange in the Erzurum-Bayburt region is also explored. The latter aspect utilises geochemical data from obsidian samples collected by the author from fourteen archaeological sites and one potential source in the Erzurum-Bayburt region⁶ These samples were analysed between 1993 and 1995 using the procedures described herein.

Geology of the Erzurum district

The area stretching from Erzurum to Kars is dominated by thick sequences of mainly calc-alkaline Tertiary and Quaternary volcanic rocks that formed during the convergence of the Eurasian and Afro-Arabian plates.⁷ Geological mapping of the Erzurum district⁸ led to the delineation of six Cainozoic volcanic units: andesitic-basaltic strato-volcanoes; rhyodacitic and dacitic domes; andesitic domes; basaltic domes and flow-domes; and basaltic fissure volcanoes. Significant quantities of obsidian occur in two of these volcanic units, namely the obsidian-rich pyroclastic cones, and the basaltic fissure volcanoes. In the former, obsidian is present either as layers of orientated vitreous shards in tuffs, or as flows of obsidian up to 20cm thick. The basaltic fissure volcanoes are major geologic structures, extending for more than 100km with individual ridges attaining lengths of up to 40km.⁹ The type section at Tabye Dağı is over 200 m thick and contains five different basaltic lava flows with intercalated pyroclastics including obsidian-rich tuffs.

⁵ Ercan, Şaroğlu and Kuşçu 1996.

⁶ Brennan 1995.

⁷ Innocenti *et al.* 1982.

⁸ Pasquarè 1971.

⁹ Pasquarè 1971, fig. 7.

Previous archaeometric studies

(a) *Bayburt Plains*

In previous studies the geochemistry of obsidian collected from archaeological sites (Fig. 2) on the Bayburt Plains¹⁰ and from both archaeological sites and some possible alluvial sources¹¹ in the Erzurum area (Tables 3, 4) was reported. Despite an extensive search, no potential obsidian sources on or near the Bayburt Plains were located. This conspicuous absence, when combined with the strong similarities in geochemistry between samples collected from the Bayburt region and those from potential sources in the Erzurum district, suggests that some form of contact existed between these two areas during the 3rd and 2nd millennia BC.¹²

(b) *Pulur*

Of particular interest was the discovery that the early inhabitants of the Erzurum-Bayburt region obtained their supplies of obsidian from alluvial rather than primary sources. This interpretation was based on samples obtained from the archaeological sites of Pulur and Sos Höyük, and the alluvial gravels along the Adaçay River at Pulur, and the Aras River at Pasinler.

At the site of Pulur, located south-west of Erzurum (Fig. 3), abundant obsidian tools and waste flakes occur throughout the sequence, which is dateable largely to the second and third millennia BC. The quantity of obsidian present at the site is greatly in excess of that present at sites on the Bayburt Plains, and suggests that the early inhabitants of Pulur had ready access to an obsidian source. Field survey near the site led to the discovery of water-worn obsidian cobbles, up to 20cm in diameter, in the adjacent Adaçay River. Instrumental Neutron Activation Analysis (INAA) of representative samples indicated that some of the archaeological obsidian from the site of Pulur had the same geochemistry as alluvial samples from the river gravels.¹³ The alluvial deposits at Pulur were probably derived from multiple primary sources located further south on the nearby Palandöken Dağları volcanic ridge.

¹⁰ Sagona and Brennan 1994.

¹¹ Brennan 1995.

¹² Brennan 1995.

¹³ Brennan 1995.

(c) Sos Höyük

Sos Höyük is located approximately 24 km east of Erzurum on the Çökender, a tributary of the Aras River (Fig. 3). Obsidian tools, unused or partially utilised obsidian cobbles, and waste flakes are very common at the site and in the adjacent fields. Field traverses to the west and south-west along creek beds near Sos Höyük indicated that the alluvial gravels, unlike those at Pulus did not serve as local alluvial sources of obsidian. The areas upstream from Sos Höyük that are drained by these creeks are consequently unlikely to contain significant primary obsidian sources. A reconnaissance survey of the southern side of the 3000 m Mount Kargapazar, which rises to the north of the site, also failed to detect any significant amounts of primary obsidian.

Investigation of the Aras River gravels near the town of Pasinler, approximately 13 km east of Sos Höyük, revealed the presence of abundant water-worn cobbles, up to 20 cm in diameter. The similarity in appearance between these cobbles and some found at Sos Höyük suggested that the alluvial deposits of the Aras River were utilised as a source of obsidian during the Bronze Age.¹⁴

1995-1996 Field and analytical program

During the 1995 field season, a survey of the area upstream from Pasinler was initiated in an attempt to locate the source of the obsidian cobbles. A probable source for at least some of the cobbles was found on a ridge immediately east of the gorge cut by the Malikom River, a tributary of the Aras River, approximately 14 km to the north of Pasinler. At least five discrete flows of obsidian each up to several metres thick outcrop in a deep gully that cuts into the side of the ridge above the gorge. The flows are inter-bedded with obsidian-rich tuffs. Obsidian eroded from the flows is deposited in the riverbed at the base of the gorge where it forms the dominant alluvial rock-type. Pebbles and small cobbles of obsidian also occur in some of the volcanic tuffs exposed on the west side of the gorge. The river terraces downstream from the gorge contain large quantities of obsidian cobbles and small boulders.

In order to establish the range in intra-flow and inter-flow geochemistry, samples were collected from the top to the bottom of the sequence for analysis. The collection process was aided by the excellent exposure of the

¹⁴ Brennan 1995.

sequence. Several samples were also collected for comparative purposes from the tuffs exposed in the cliffs on the west side of the gorge.

Methodology

Twenty unaltered samples, comprising 17 from the flows above the gorge (samples 96-1 to 96-17), one from the tuff exposed in the west face of the gorge (sample 96-18), and two from the alluvial gravels at Pasinler (samples 96-19, 96-20), were selected for INAA. Each sample was washed several times in distilled water and then placed in an ultrasonic bath. Following further washing with distilled water, the samples were dried, placed between clean polyethylene sheets, and broken into small fragments using a hydraulic press. New polyethylene sheets were used for each sample. The jaws of the press were cleaned thoroughly with a brush and compressed air between each sample. An agate mortar was used to crush the small fragments into a very fine powder that was then placed into clean glass containers. The mortar was cleaned between samples by crushing acid-washed quartz sand and then washing the mortar with acetone. Approximately 10 g of each sample was placed into clean glass tubes, labelled with appropriate field numbers and sent for analysis.

A rhyolite standard, RGM-1 from the U.S. Geological Survey (USGS), was analysed with the obsidian samples to provide a check on consistency between batches (Table 2). Of the 22 elements analysed, 14 vary by less than 3%, and 19 by 5% or less. The three elements that showed the most variation were U, Fe, and Ho. The precision obtained for Ho and U reflects the low concentrations present, less than ten times the detection limit (Table 2).

Multi-element geochemical analyses were obtained by INAA at Becquerel Laboratories, Sydney, using the Australian Nuclear Science and Technology Organisation's HIFAR reactor at Lucas Heights. For the analysis 1g samples in flat polyethylene bags about 1 cm square were attached to individual flux monitors and irradiated in several batches for between ten and thirty minutes. Samples irradiated for the longer period were in the lower flux position (approximately $2 \times 10^{12} \text{ n cm}^{-2} \text{ s}^{-1}$), while those in the higher flux position (approximately $3\text{--}4 \times 10^{12} \text{ n cm}^{-2} \text{ s}^{-1}$) were irradiated for shorter periods. Each sample was tested for activity levels and the sample-detector geometry adjusted so that dead time corrections were not necessary. All samples were counted for 60 minutes after a decay period of six to seven days. The elements determined at this time were La, Sm, Ho, Yb, Lu,

As, K, Na, and U. A further count, lasting 60 minutes, was performed after a decay period of 7 to 14 days to allow the determination of Ce, Nd, Eu, Tb, Co, Fe, Sc, Ba, Cs, Hf, Rb, Ta, and Th.

Accuracy was monitored using international and in-house rock standards, as well as synthetic standards prepared by Becquerel Laboratories for initial flux-element calibration. Precision was monitored by in-house standards within and between batches of samples. The gamma ray spectra were measured using hyperpure Ge coaxial detectors (16.7% to 18.2% efficiency, resolution 1.71 – 1.75 keV at 1332.5 keV Co⁶⁰) linked to multi-channel analysers as part of an integrated counting control and data handling system. Spectral data were analysed using in-house programs developed by Becquerel Laboratories.

The INAA results for the 20 samples analysed in 1996, as well as those for the Erzurum and Bayburt samples analysed in 1993 and 1994, are tabulated in Table 1.

Analytical results

(a) *Malikom Gorge*

Obsidian characterisation studies have utilised a variety of elements and element ratios to differentiate sources, and to attribute obsidian recovered from archaeological contexts to particular primary sources. One simple yet effective method is to compare samples in terms of caesium (Cs) and lanthanum (La) concentrations normalised against scandium (Sc). This approach is used in Fig. 4 to compare the Malikom Gorge and Malikom Tuff samples. Intra-flow and inter-flow geochemical variation of the selected elements in the Malikom Gorge samples is limited, a feature that should enhance the possibility of routinely distinguishing this source from other sources in the Erzurum region. The single Malikom Tuff sample plots close to the Malikom Gorge samples, suggesting that obsidian in the currently exposed sequence has a relatively uniform composition in terms of the selected elements. From an archaeological perspective, the obsidian fragments present in the sampled tuff are too small to have been useful for making tools. Given the number of analyses obtained from this locality it is unlikely that obsidian of significantly different composition is present. However, since the area drained by the Aras River and its tributaries has not yet been surveyed in detail, it is possible that obsidian of significantly different composition may be present either higher or lower in the stratigraphic sequence at other localities in the Pasinler district.

Some of the primary obsidian samples from the Malikom Gorge area and one of the Sos Höyük archaeological samples (95-4) have identical Cs/Sc and La/Sc ratios (Fig. 5). This confirms the identification of the Malikom Gorge sequence as the original source for at least some of the Sos Höyük obsidian. The composition of Pasinler alluvial sample 96-19 and Tepecik Koy 1 archaeological sample 95-2 suggests that they too originally came from the Malikom Gorge sequence (Figs. 5-6). Sos Höyük samples 95-3, 95-5, 95-6, Pasinler sample 96-20, and Tepecik Koy 1 sample 95-1 (Figs. 5-6) are geochemically distinct from the Malikom Gorge source and appear to have come from four or five as yet unlocated primary sources in the Pasinler area.

The origin of the remaining Tepecik 2 samples (95-17, 95-18) is still problematic due to overlap with the Malikom Gorge samples in some plots. Given the restricted geochemical variability in the Malikom Gorge sequence it is possible that these samples are from a closely related but still distinct source. Analysis of additional samples from these sites is required to determine if this interpretation is valid. Both Tepecik Koy 1 and Tepecik 2 are located near the obsidian-rich alluvial deposits flanking the Aras River to the south-east of Pasinler, which can be assumed to be the immediate source of the obsidian at these sites.

(b) Obsidian Compositions in the Erzurum Area

The Malikom Gorge source can be readily differentiated from the Pulus alluvial source and one of the Pasinler alluvial source compositions using a Cs/Sc vs. La/Sc plot (Fig. 7). This confirms the presence of at least four distinct source compositions in the Erzurum area. In addition, when the caesium (Cs) and lanthanum (La) concentrations (normalised against scandium (Sc) concentrations) of primary and alluvial source samples, and archaeological obsidian samples from the Erzurum area are plotted (Fig. 8), two distinct geochemical trends, one characterised by lower lanthanum/scandium ratios, and the other by higher lanthanum/scandium ratios are apparent. Confirmation for the validity of these geochemical trends is provided by the chondrite-normalised Rb vs. Th plot (Fig. 9) that also includes obsidian analyses of samples from sites on the Bayburt Plains. One of the samples from İvikler Tepesi (94-6) is anomalous, suggesting that it has a source outside the Erzurum area¹⁵.

Most obsidian samples from individual sites in the Erzurum region plot within a single trend. The only site to have samples that plot on both trends

¹⁵ Brennan, 1995.

is Pülür. This may be indicative of more complex geology in the source area of the Pülür samples than in the source areas for the obsidian collected from the other sites. However, in view of the restricted number of samples analysed from some sites, the possibility that obsidian with both low and high lanthanum/scandium ratios is present at more sites cannot be discounted. This problem will be addressed in on-going studies.

The grouping of tantalum/ytterbium and thorium/ytterbium ratios observed for the Erzurum region obsidian samples (Fig. 10) may reflect fundamental geochemical differences in the mantle source material¹⁶ from which the obsidian and related rock-types were derived. Limited support for this suggestion is provided by the ratios measured for basaltic to rhyolitic calc-alkaline volcanic rocks from Eastern Anatolia (Fig. 11). The Kars data in particular define a trend that, if extended, would intersect the region occupied by the higher Th/Yb ratio obsidian samples from the Erzurum region. If this observation proves to be valid, it may provide another tool for distinguishing at least some of the Erzurum sources from the largely chemically unknown obsidian sources with a similar petrogenetic history outcropping in the Kars region.

Archaeological implications

There are at least five geochemical groups visible in Fig. 8. This indicates that the obsidian used by the Bronze Age inhabitants of the Erzurum area came from at least five chemically distinct sources. At sites such as Pülür, Aşkale Höyük, and Sos Höyük, obsidian from two or more different sources was utilised. Access to obsidian ultimately derived from multiple primary sources may prove to be characteristic of the Erzurum region sites.

The similarity in geochemistry between the Malikom Gorge source, and one of the Sos Höyük samples (95-4) shows that the Malikom Gorge obsidian was a significant primary source for the area east of Erzurum. The presence of obsidian from four different sources at Sos Höyük, the similarity in size and appearance of obsidian cobbles at Sos Höyük and in the Pasinler alluvium, and the abundance of obsidian cobbles at Sos Höyük, are consistent with the view that obsidian was collected from the easily accessible secondary alluvial deposits near Pasinler rather than during visits to the more distant, primary obsidian sources. The primary sources for the other types of obsidian found at Sos Höyük have not yet been located, though field evidence indicates that some lie further to the north of the obsidian flows discovered in 1995, and others to the south of Pasinler.

¹⁶ Pearce *et al.* 1990.

Geochemical analysis of obsidian from the Erzurum area has revealed multiple distinct primary sources that can be readily distinguished from the other better-known sources in Turkey. The presence of abundant obsidian cobbles in the extensive linear deposits of alluvium near Pasinler and Pular coupled with the occurrence of geochemically similar material at the sites of Sos and Pular provide strong support for identifying the alluvial deposits on the Erzurum Plains as the major source of obsidian during the Early and Middle Bronze Ages in this region. The establishment of many Bronze Age sites around Erzurum on or close to the alluvial deposits of the major rivers and their tributaries would have ensured that access to supplies of obsidian within the region was unrestricted. Whether any of these Erzurum sites acted as a redistribution centre for demand outside the supply zone, remains to be thoroughly tested. On present evidence, however, it seems that the Erzurum sources were not part of the extensive trade networks that involved the central and eastern Anatolian obsidian sources. Indeed the nature of obsidian procurement and the concept of exchange systems in Anatolia and beyond will need to be re-examined in light of the data emerging from the north-eastern provinces.

The restricted distribution of Erzurum obsidian may be due to, or influenced by, one or more of the following:

- (a) Erzurum sources are geographically more remote from potential markets in the Levant, Iran, and Iraq than the better known deposits in Central Turkey, Bingöl, and Lake Van.
- (b) Main routes of communication in north-eastern Anatolia are aligned east-west either through the valleys of the Karasu and Aras Rivers and the Erzurum Plains, or through the valleys of the Kelkit and Çoruh rivers and the Bayburt Plains. Access from the Erzurum Plains to the north and south is difficult due to the presence of two mountain ranges, the Palandöken Dağları to the south, and the Kargapazarı Dağları to the north. The latter separates the Erzurum Plains from the corridor defined by the Kelkit and Çoruh rivers.
- (c) Potential for trade in obsidian to the west along the Karasu is constrained by the availability of obsidian at Bingöl, and the central Turkey sources. To the east, the nearest recorded source is at Sarıkamış, 152 km from Erzurum. The potential for trade in this direction is dependent on the distance obsidian is transported from the Pasinler sources by the Aras river, and whether there are any other sources to the east of Pasinler. Future studies may be able to define distribution zones emanating from both Pasinler and Sarıkamış.

- (d) Obsidian from the Erzurum area (**Fig. 9**) has been identified at sites on the Bayburt Plains¹⁶. However, the relatively small quantity of material present and the small size of individual fragments suggest infrequent contact between these areas. Consequently, it is unlikely that Erzurum obsidian will be found significantly further west along the Kelkit-Çoruh corridor than the Bayburt Plains.
- (f) An inherent cultural conservatism in the Erzurum region during the third and second millennia BC, is clearly attested at Sos Höyük by the lingering on of the Early Trans-Caucasian (Kura-Araxes) cultural complex well into the mid-second millennium BC. Given the evident cultural contact with adjacent territories, especially the lands of Trans-Caucasus, and the relative prosperity of sites around Erzurum, the restricted distribution of Erzurum obsidian and the cultural conservatism may also reflect a socio-economic unit independent of adjacent regions.

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¹⁶ Sagona and Brennan, 1994.

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Table 1. INAA data for obsidian samples analysed from the Erzurum area, and the Bayburt Plains

Sample No. Location	94-1 Çaryıryolu Tepe 2	94-2 Çaryıryolu Tepe 2	94-3 Kilise Tepe	94-4 Gundulak Tepe	94-5 Gundulak Tepe	94-6 Ivikler Tepesi	94-7 Ivikler Tepesi
As (ppm)	2.87	2.53	3.39	3.2	2.96	3.95	2.66
Ba (ppm)	-100	-100	-100	-100	-100	-100	-100
Cs (ppm)	4.88	5.63	5.52	5.32	5.39	5.36	5.29
Co (ppm)	0.15	0.21	0.58	0.55	0.32	0.48	0.41
Hf (ppm)	5.4	5.15	5.35	6.09	5.63	5.99	5.76
Fe (%)	0.73	0.7	0.71	0.81	0.77	0.92	0.78
K (%)	3.4	3.66	3.74	3.77	3.74	3.06	3.41
Rb (ppm)	159	173	168	167	158	131	161
Sc (ppm)	2.03	2.06	2.09	2.22	2.11	1.08	2.14
Na (%)	2.92	3.06	2.98	3.16	3.08	3.15	3.06
Ta (ppm)	1.91	2.42	1.77	1.98	1.73	1.93	2.15
Th (ppm)	34.3	36.9	36.6	36.4	36.2	20.3	35.7
U (ppm)	8.6	10.7	10.2	9.7	9.76	6.23	10.6
La (ppm)	45.2	46.8	45.4	49.5	48.1	33.1	47.8
Ce (ppm)	86.7	88.3	86.3	94	90.5	67.7	91
Nd (ppm)	32.2	31.7	30.3	33.1	33.8	27.9	30.7
Sm (ppm)	5.12	5.47	5.25	5.52	5.34	5.36	5.31
Eu (ppm)	0.14	0.06	0.09	0.12	0.15	0.31	0.14
Tb (ppm)	0.8	0.7	0.76	0.72	0.68	0.72	0.73
Ho (ppm)	1.28	1.26	1.28	1.26	1.19	1.22	1.28
Yb (ppm)	3.38	3.47	3.72	3.75	3.72	3.54	3.48
Lu (ppm)	0.54	0.59	0.55	0.57	0.58	0.54	0.55

Sample No. Location	94-8 Büyüktepe	94-9 Büyüktepe	94-10 Büyüktepe	94-11 Büyüktepe	94-12 Büyüktepe	95-1 Tepecik Koy 1	95-2 Tepecik Koy 1
As (ppm)	2.17	3.71	2.33	2.65	2.79	2.90	3.03
Ba (ppm)	-100	-100	-100	-100	-100	-50.00	-50.00
Cs (ppm)	5.5	4.99	5.35	5.79	5.31	5.13	5.33
Co (ppm)	0.49	0.31	0.25	0.27	0.48	0.49	0.60
Hf (ppm)	5.22	5.94	4.95	5.18	5.76	5.30	4.91
Fe (%)	0.72	0.8	0.67	0.7	0.78	0.72	0.67
K (%)	3.32	3.57	3.26	3.42	3.64	3.25	3.42
Rb (ppm)	167	160	163	173	159	150.00	159.00
Sc (ppm)	2.12	2.15	1.98	2.03	2.15	2.10	2.06
Na (%)	2.99	3.06	2.87	3	3.21	2.90	2.89
Ta (ppm)	1.94	2.01	2.13	2.42	2.14	2.39	2.03
Th (ppm)	37	34.9	34.9	37.2	35.9	35.80	36.10
U (ppm)	10.4	10.1	11.7	11.6	11.8	7.67	9.21
La (ppm)	46	47.9	43.9	46.6	49.5	45.70	45.20
Ce (ppm)	88.2	90	84.6	89.2	91.5	85.50	83.30
Nd (ppm)	31.7	33.7	30.7	32.2	35.4	32.20	30.70
Sm (ppm)	5.25	5.22	5.01	5.35	5.44	5.21	5.16
Eu (ppm)	0.07	0.16	0.11	0.1	0.13	0.20	0.11
Tb (ppm)	0.85	0.68	0.72	0.82	0.8	0.89	0.93
Ho (ppm)	1.4	1.22	1.22	1.34	1.41	1.41	1.34
Yb (ppm)	3.72	3.38	3.26	3.48	3.89	3.58	3.51
Lu (ppm)	0.5	0.55	0.53	0.57	0.57	0.54	0.54

Table 1 (cont.)

Sample No. Location	95-3 Sos Höyük	95-4 Sos Höyük	95-5 Sos Höyük	95-6 Sos Höyük	95-7 Pulur (Erzurum)	95-8 Pulur (Erzurum)	95-9 Pulur (Erzurum)
As (ppm)	3.43	2.84	3.10	2.34	4.56	4.56	2.95
Ba (ppm)	-50.00	-50.00	86.40	72.70	-50.00	-50.00	-50.00
Cs (ppm)	6.15	5.73	5.54	3.96	8.79	8.54	5.03
Co (ppm)	0.30	0.53	-0.20	0.61	-0.20	0.26	-0.20
Hf (ppm)	5.42	5.21	5.11	8.58	11.60	11.80	5.87
Fe (%)	0.70	0.71	0.66	1.11	1.58	1.54	0.80
K (%)	3.72	3.47	3.66	3.71	3.60	3.38	3.79
Rb (ppm)	182.00	168.00	172.00	140.00	158.00	167.00	163.00
Sc (ppm)	2.12	2.08	2.00	2.70	2.61	2.54	2.17
Na (%)	3.19	2.91	2.92	3.32	3.55	3.57	2.93
Ta (ppm)	2.42	2.05	2.24	1.46	2.49	2.55	1.91
Th (ppm)	38.40	36.80	36.10	30.70	20.60	20.10	34.60
U (ppm)	9.23	11.40	11.00	6.52	6.11	5.45	9.70
La (ppm)	49.90	45.70	45.60	53.00	50.10	49.90	47.90
Ce (ppm)	89.50	85.50	86.30	96.50	104.00	104.00	88.80
Nd (ppm)	33.70	31.70	31.30	33.70	47.20	47.20	33.70
Sm (ppm)	5.74	5.14	5.14	5.22	8.89	8.85	5.11
Eu (ppm)	0.08	0.07	0.09	0.28	0.28	0.20	0.15
Tb (ppm)	1.02	0.90	1.01	0.88	1.50	1.41	0.92
Ho (ppm)	1.41	1.28	1.46	1.28	2.15	2.26	1.43
Yb (ppm)	4.29	3.49	3.90	3.46	5.87	5.78	3.89
Lu (ppm)	0.63	0.59	0.57	0.57	0.91	0.94	0.56

Sample No. Location	95-10 Pulur (Erzurum)	95-11 Pulur (Erzurum)	95-12 Pulur (Erzurum)	95-13 Pulur (Erzurum)	95-14 Pulur (Erzurum)	95-15 Pulur (Erzurum)	95-16 Pulur (Erzurum)
As (ppm)	3.64	3.39	4.14	3.83	3.68	3.84	3.33
Ba (ppm)	154.00	171.00	-50.00	263.00	-50.00	-50.00	213.00
Cs (ppm)	7.24	7.54	9.12	7.47	5.55	8.24	7.16
Co (ppm)	0.46	0.46	0.38	0.23	0.48	-0.20	0.31
Hf (ppm)	10.30	10.20	11.70	10.50	5.31	11.20	10.40
Fe (%)	1.67	1.62	1.56	1.64	0.69	1.51	1.63
K (%)	3.35	3.57	3.50	3.77	3.25	3.47	3.44
Rb (ppm)	150.00	143.00	161.00	150.00	169.00	155.00	141.00
Sc (ppm)	3.87	3.87	2.58	3.94	2.02	2.60	3.85
Na (%)	3.65	3.64	3.53	3.71	2.92	3.43	3.71
Ta (ppm)	2.07	1.99	2.34	2.07	2.18	2.15	1.66
Th (ppm)	17.80	17.50	19.80	18.00	36.30	19.80	17.50
U (ppm)	5.01	4.65	7.66	5.92	10.40	6.07	7.00
La (ppm)	44.80	44.90	49.60	45.30	46.00	48.80	45.50
Ce (ppm)	92.10	92.70	101.00	93.60	85.50	102.00	92.50
Nd (ppm)	40.90	42.90	42.70	39.10	32.00	47.20	42.90
Sm (ppm)	7.96	7.92	8.66	8.06	5.18	8.50	7.98
Eu (ppm)	0.53	0.54	0.29	0.44	0.10	0.18	0.55
Tb (ppm)	1.12	1.30	1.54	1.27	0.75	1.39	1.45
Ho (ppm)	1.79	1.96	2.29	1.98	1.19	2.16	2.14
Yb (ppm)	5.28	5.20	5.88	5.35	3.52	5.59	5.72
Lu (ppm)	0.85	0.79	0.91	0.84	0.55	0.89	0.83

Table 1 (cont.)

Sample No. Location	95-17 Tepecik 2	95-18 Tepecik 2	95-19 Asiklar Höyük	95-20 Asiklar Höyük	95-21 Askale Höyük	95-22 Askale Höyük	95-23 Alaca Höyük
As (ppm)	3.08	3.51	3.54	2.84	3.64	3.80	3.68
Ba (ppm)	-50.00	-50.00	-50.00	-50.00	269.00	223.00	-50.00
Cs (ppm)	4.98	5.71	7.98	7.90	7.76	8.03	8.79
Co (ppm)	0.62	-0.20	0.23	-0.20	0.35	-0.20	0.54
Hf (ppm)	5.91	5.00	11.50	11.10	10.30	11.00	12.10
Fe (%)	0.79	0.68	1.64	1.60	1.65	1.61	1.59
K (%)	3.63	3.98	3.25	3.59	3.41	3.54	3.60
Rb (ppm)	161.00	165.00	156.00	162.00	146.00	148.00	165.00
Sc (ppm)	2.20	2.04	3.35	3.36	3.91	3.34	2.58
Na (%)	3.09	2.92	3.61	3.56	3.66	3.56	3.61
Ta (ppm)	1.94	2.20	2.23	2.48	2.21	2.31	2.18
Th (ppm)	35.30	36.30	18.80	18.90	17.80	19.10	20.70
U (ppm)	9.14	9.40	4.33	4.77	5.29	5.53	6.63
La (ppm)	48.40	46.30	47.40	47.00	45.20	47.00	51.60
Ce (ppm)	88.60	85.00	98.90	97.30	95.70	98.90	104.00
Nd (ppm)	32.20	30.60	42.90	47.20	45.00	40.90	47.20
Sm (ppm)	5.33	5.24	8.59	8.55	8.16	8.42	9.11
Eu (ppm)	0.10	0.06	0.45	0.35	0.54	0.30	0.15
Tb (ppm)	0.97	1.02	1.50	1.45	1.19	1.25	1.57
Ho (ppm)	1.41	1.36	2.06	2.16	1.87	1.97	2.40
Yb (ppm)	3.67	3.61	5.50	5.54	5.26	5.81	6.18
Lu (ppm)	0.58	0.59	0.81	0.84	0.80	0.86	0.90

Sample No. Location	95-24 Alaca Höyük	95-25 Cinis	95-26 Cinis	95-27 Karaz	95-28 Karaz	96-1 Malikom Gorge	96-2 Malikom Gorge
As (ppm)	4.54	2.79	3.97	2.84	3.02	3.42	2.91
Ba (ppm)	-50.00	71.90	164.00	101.00	-50.00	-50.0	-50.0
Cs (ppm)	8.21	7.88	7.65	5.98	5.88	6.15	5.80
Co (ppm)	0.57	-0.20	0.35	2.79	0.21	.25	.42
Hf (ppm)	11.80	11.20	11.00	5.14	5.11	5.26	5.27
Fe (%)	1.65	1.69	1.68	0.77	0.69	.72	.72
K (%)	3.41	3.45	3.53	3.21	3.28	3.36	3.26
Rb (ppm)	170.00	150.00	163.00	168.00	157.00	167.0	167.0
Sc (ppm)	2.72	3.43	3.37	2.14	1.98	2.11	2.11
Na (%)	3.57	3.65	3.63	2.95	2.87	2.940	2.840
Ta (ppm)	2.02	2.48	2.13	2.35	1.80	1.73	1.75
Th (ppm)	20.50	19.10	19.20	37.80	35.70	37.30	37.20
U (ppm)	6.81	4.76	5.82	9.67	11.30	9.12	8.90
La (ppm)	49.70	47.90	47.30	46.60	45.40	46.90	45.60
Ce (ppm)	103.77	101.00	101.00	88.70	84.80	86.90	86.90
Nd (ppm)	49.52	45.00	47.20	35.40	30.70	30.60	29.80
Sm (ppm)	8.92	8.61	8.56	5.29	5.18	5.44	5.34
Eu (ppm)	0.26	0.38	0.27	0.12	0.08	.08	.07
Tb (ppm)	1.65	1.34	1.56	1.07	0.97	.78	.74
Ho (ppm)	2.27	2.29	2.20	1.47	1.34	1.38	1.18
Yb (ppm)	6.01	5.69	5.37	3.86	3.50	3.71	3.77
Lu (ppm)	0.93	0.88	0.87	0.57	0.53	.57	.59

Table 1 (cont.)

Sample No. Location	96-3 Malikom Gorge	96-4 Malikom Gorge	96-5 Malikom Gorge	96-6 Malikom Gorge	96-7 Malikom Gorge	96-8 Malikom Gorge	96-9 Malikom Gorge
As (ppm)	3.13	3.15	3.03	2.91	8.60	12.90	12.50
Ba (ppm)	-50.0	-50.0	83.0	-50.0	-50.0	-50.0	-50.0
Cs (ppm)	5.71	6.05	5.81	5.72	5.77	5.58	5.73
Co (ppm)	.23	.25	.24	.17	.12	.29	.19
Hf (ppm)	5.10	5.20	5.03	5.09	4.98	5.11	5.17
Fe (%)	.68	.70	.70	.70	.69	.68	.69
K (%)	3.28	3.44	3.17	3.25	3.30	3.22	3.33
Rb (ppm)	160.0	166.0	165.0	159.0	162.0	162.0	166.0
Sc (ppm)	2.07	2.09	2.05	2.06	2.10	2.04	2.04
Na (%)	2.880	2.950	2.810	2.840	2.850	2.770	2.830
Ta (ppm)	1.83	1.87	1.53	1.75	1.59	1.68	1.74
Th (ppm)	36.00	36.60	35.90	36.00	36.30	36.00	36.00
U (ppm)	7.78	9.81	7.71	8.54	8.18	7.19	9.42
La (ppm)	46.00	47.10	44.50	45.30	46.00	44.70	45.80
Ce (ppm)	84.70	86.90	80.40	82.50	86.90	84.70	80.40
Nd (ppm)	29.80	29.10	29.10	26.20	29.80	30.60	29.10
Sm (ppm)	5.42	5.49	5.29	5.25	5.38	5.27	5.29
Eu (ppm)	.07	.09	.07	.09	.08	.08	.09
Tb (ppm)	.71	.70	.73	.75	.63	.69	.73
Ho (ppm)	1.18	1.15	1.21	1.18	1.09	1.24	1.24
Yb (ppm)	3.42	3.60	3.48	3.60	3.58	3.83	3.70
Lu (ppm)	.54	.60	.56	.59	.59	.59	.61

Sample No. Location	96-10 Malikom Gorge	96-11 Malikom Gorge	96-12 Malikom Gorge	96-13 Malikom Gorge	96-14 Malikom Gorge	96-15 Malikom Gorge	96-16 Malikom Gorge
As (ppm)	11.10	10.20	9.89	9.53	8.89	7.91	6.43
Ba (ppm)	-50.0	-50.0	-50.0	65.0	-50.0	55.0	-50.0
Cs (ppm)	5.69	5.84	5.77	5.76	5.99	5.92	5.66
Co (ppm)	.24	.17	.16	.30	.24	.32	.15
Hf (ppm)	5.12	5.12	5.13	5.28	5.09	5.31	5.00
Fe (%)	.68	.70	.69	.69	.70	.70	.68
K (%)	3.36	3.26	3.24	3.37	3.19	3.16	3.14
Rb (ppm)	161.0	164.0	163.0	167.0	163.0	162.0	164.0
Sc (ppm)	2.05	2.07	2.09	2.12	2.09	2.10	2.04
Na (%)	2.820	2.830	2.840	2.880	2.840	2.840	2.840
Ta (ppm)	1.63	1.73	1.91	1.79	1.73	1.75	1.79
Th (ppm)	35.90	36.40	36.40	37.10	36.80	36.20	36.00
U (ppm)	8.60	9.27	9.13	8.35	7.73	7.97	8.40
La (ppm)	45.60	45.40	46.00	46.60	45.70	46.20	45.70
Ce (ppm)	89.20	82.50	84.70	93.50	84.70	89.20	84.70
Nd (ppm)	27.60	30.60	29.10	30.60	27.60	30.60	28.30
Sm (ppm)	5.36	5.32	5.35	5.51	5.42	5.35	5.38
Eu (ppm)	.12	.09	.07	.09	.11	.12	.09
Tb (ppm)	.75	.73	.69	.76	.76	.66	.76
Ho (ppm)	1.31	1.24	1.34	1.34	1.41	1.24	1.27
Yb (ppm)	3.43	3.55	3.60	3.67	3.72	3.81	3.36
Lu (ppm)	.54	.59	.59	.59	.60	.63	.53

Table 1 (cont.)

Sample No. Location	96-17 Malikom Gorge	96-18 Malikom Tuff	96-19 Pasinler	96-20 Pasinler
As (ppm)	5.49	4.36	3.82	2.70
Ba (ppm)	50.0	50.0	50.0	57.0
Cs (ppm)	5.63	5.51	5.47	4.17
Co (ppm)	.25	.23	.18	.45
Hf (ppm)	5.15	4.98	5.05	7.75
Fe (%)	.69	.66	.70	1.01
K (%)	3.29	3.28	2.96	3.42
Rb (ppm)	164.0	166.0	160.0	137.0
Sc (ppm)	2.04	2.05	2.08	2.54
Na (%)	2.810	2.800	2.830	3.110
Ta (ppm)	1.71	1.66	1.75	1.53
Th (ppm)	36.10	35.90	35.50	29.50
U (ppm)	9.02	8.79	7.71	7.95
La (ppm)	44.80	44.40	45.80	51.00
Ce (ppm)	86.90	89.80	91.20	97.10
Nd (ppm)	29.10	30.60	31.40	29.20
Sm (ppm)	5.30	5.30	5.37	5.15
Eu (ppm)	.09	.10	.08	.26
Tb (ppm)	.66	.68	.59	.64
Ho (ppm)	1.15	1.24	1.06	1.05
Yb (ppm)	3.66	3.58	3.54	3.33
Lu (ppm)	.58	.60	.60	.51

Table 2. INAA data for USGS Standard RGM1

	USGS Standart RGM1	USGS Standard RGM1	Mean and Standard Deviation	Standard Deviation %	Detection Limit (ppm)
As (ppm)	2.85	2.75	2.8±0.05	1.8	0.5
Ba (ppm)	747	751	749±2	0.3	100
Cs (ppm)	9.19	8.83	9.01±0.18	2.0	0.5
Co (ppm)	2.13	2.17	2.15±0.02	0.9	0.2
Hf (ppm)	5.5	5.40	5.45±0.05	0.9	0.2
Fe (%)	1.16	1.31	1.24±0.08	6.1	0.01
K (%)	3.23	3.21	3.22±0.01	0.3	0.2
Rb (ppm)	131	142	136.5±5.5	4.0	10
Sc (ppm)	4.09	4.16	4.13±0.03	0.8	0.1
Na (%)	2.84	2.72	2.78±0.06	2.2	0.01
Ta (ppm)	1.04	1.09	1.07±0.23	2.3	1
Th (ppm)	14.6	14.40	14.5±0.1	0.7	.2
U (ppm)	5.53	3.94	4.74±0.79	16.8	2
La (ppm)	22.5	21.10	21.8±0.7	3.2	.05
Ce (ppm)	45.1	45.50	45.3±0.2	0.4	0.5
Nd (ppm)	20.9	22.20	21.55±0.65	3.0	1.0
Sm (ppm)	4.13	4.10	4.12±0.02	0.4	0.01
Eu (ppm)	0.62	0.61	0.62±0.00	0.8	0.05
Tb (ppm)	0.57	0.63	0.6±0.03	5.0	0.2
Ho (ppm)	0.83	0.93	0.88±0.05	5.7	0.2
Yb (ppm)2.31	2.53	2.42±0.11	4.5	0.03	
Lu (ppm)	0.36	0.38	0.37±0.01	2.7	0.01

Table 3. Location details for archaeological analytical samples collected from the Bayburt Plains and Erzurum region.

Sample Numbers	Site Location	Site Description
Bayburt Plains		
94-1, 94-2	Çayiryolu Tepe 2	A low, broad mound located about 2.1 km south of the village of Çayiryolu.
94-3	Kilise Tepe	A large mound located within the village of Salyazi.
94-4, 94-5	Gundulak Tepe	A moderate sized mound located on the northern edge of the Bayburt-Demirözü road, north of the village of Yukaripinali.
94-6, 94-7	Ivikler Tepesi	A small mound located approximately 1.8 km north of the village of Gökçe, 1.7km north of the Bayburt-Köse road.
94-8 to 94-12	Büyüktepe Höyük	A large, twin-peaked site approximately 1.8 km north of the village of Ciftetas.
Erzurum District		
95-1, 95-2	Tepecik Koy 1	
95-3 to 95-6	Sos Höyük	A moderate sized mound located on the Dere Suyu, approximately 24 km east of Erzurum.
95-7 to 95-16	Pulur (Erzurum)	A moderate sized mound located south-west of Erzurum on the Adacay River.
95-17, 95-18	Tepecik 2	
95-19, 95-20	Asiklar Höyük	
95-21, 95-22	Askale Höyük	
95-23, 95-24	Alaca Höyük	
95-25, 95-26	Cinis	
95-27, 95-28	Karaz	

Table 4. Location details for primary and alluvial source analytical samples collected from the Erzurum area.

Sample Numbers	Location	Description
95-11, 95-15, 95-16	Pulur (Erzurum)	Alluvial gravels in the bed of the Adacay River adjacent to the site of Pulur.
96-1 to 96-17	Malikom Gorge	Sequence of tuffs and obsidian flows exposed in a gully above the east side of the gorge, approximately 14 km north of Pasinler.
96-18	Malikom Gorge	Tuff exposed in the cliffs on the west side of the gorge, approximately 14 km north of Pasinler.
96-19, 96-20	Pasinler	Alluvial gravels in the bed of the Aras River at Pasinler.

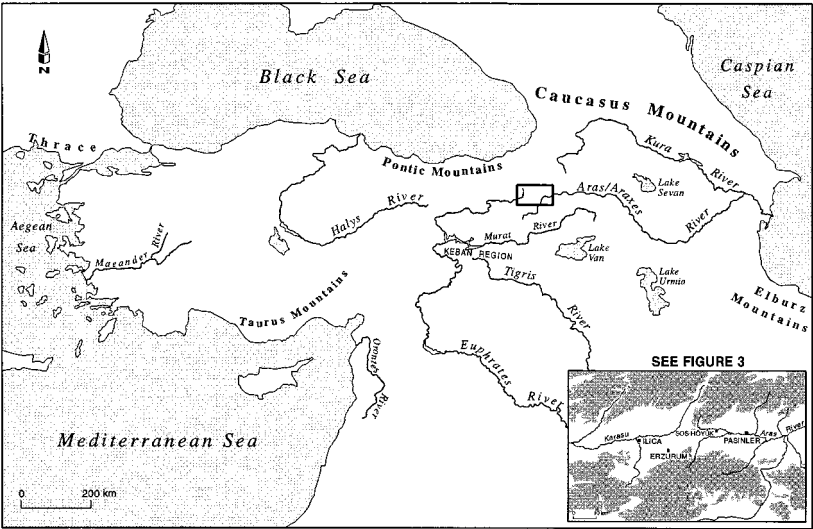


Fig. 1. Ancient Anatolia, Trans-Caucasus and Northwest Iran

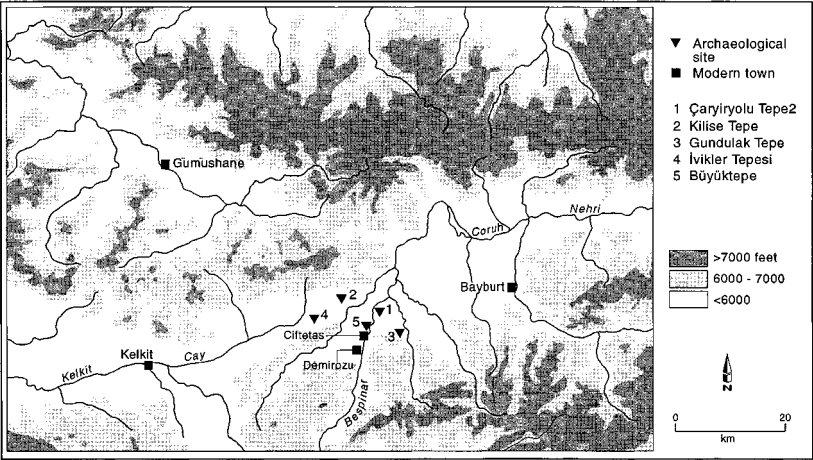


Fig. 2. Field location of obsidian samples analysed from the Erzurum area.

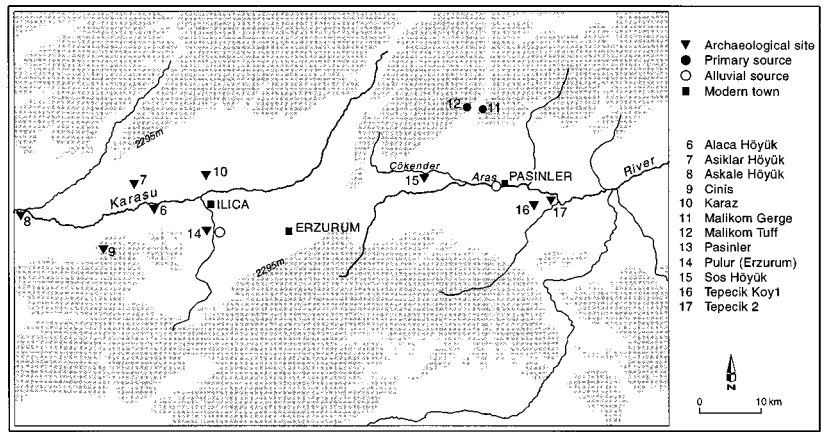


Fig. 3. Field location of obsidian samples analysed from the Bayburt area.

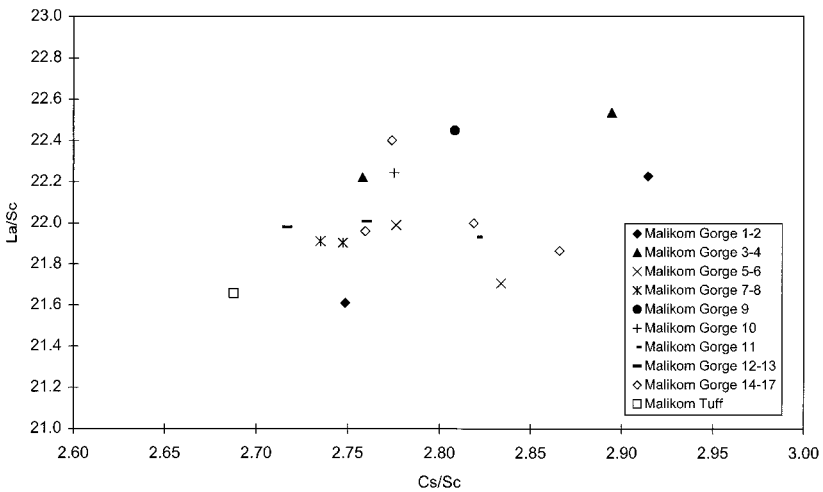


Fig. 4. Caesium/Scandium versus Lanthanum/Scandium plot of obsidian samples from the Malikom Gorge sequence (for analyses see Table 1). The terms “Malikom Gorge” and “Malikom Tuff” are informal field names used for samples collected from a gully immediately east of the gorge on the Malikom River above Pasinler, and from the west face of the gorge respectively (for analyses see Table 1). Samples with the same symbols were collected from different stratigraphic positions within the same bed.

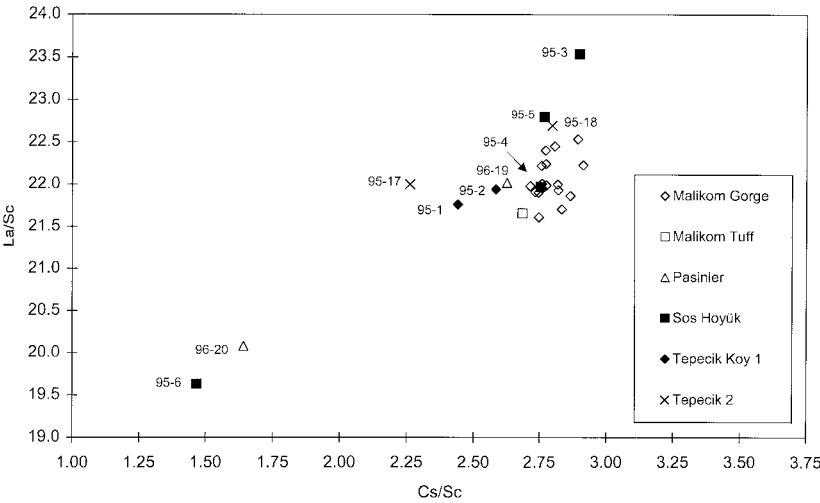


Fig. 5. Caesium/Scandium versus Lanthanum/Scandium plot of obsidian samples from the Pasinler area.

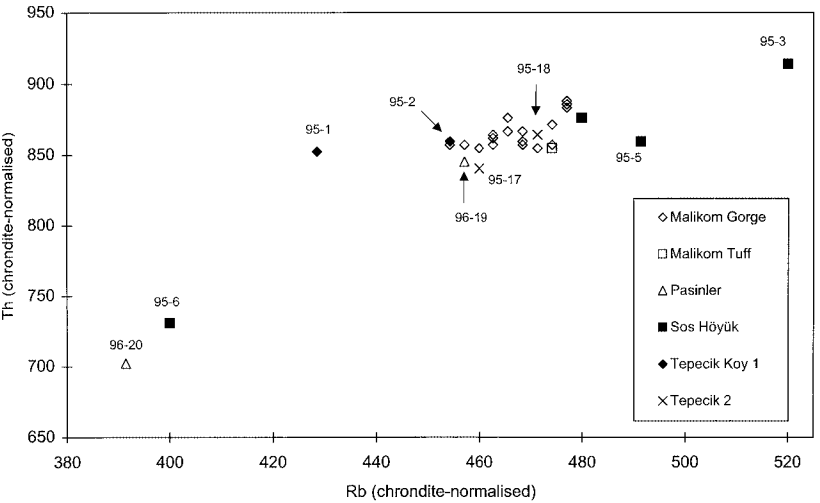


Fig. 6. Chondrite-normalised Rubidium versus Thorium plot of obsidian samples from the Pasinler area (for analyses see Table 1). The factors of Thompson 1982 were used for the normalisation calculations.

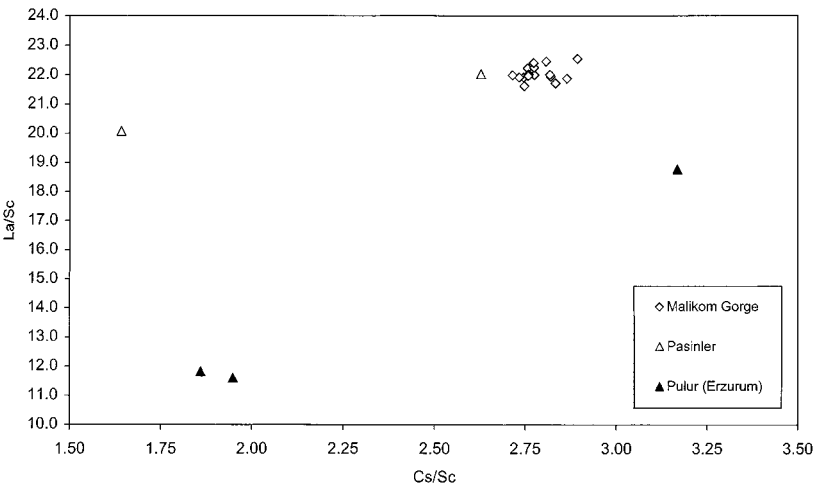


Fig. 7. Caesium/Scandium versus Lanthanum/Scandium plot of obsidian samples from primary and alluvial sources in the Erzurum area (for analyses see Table 1).

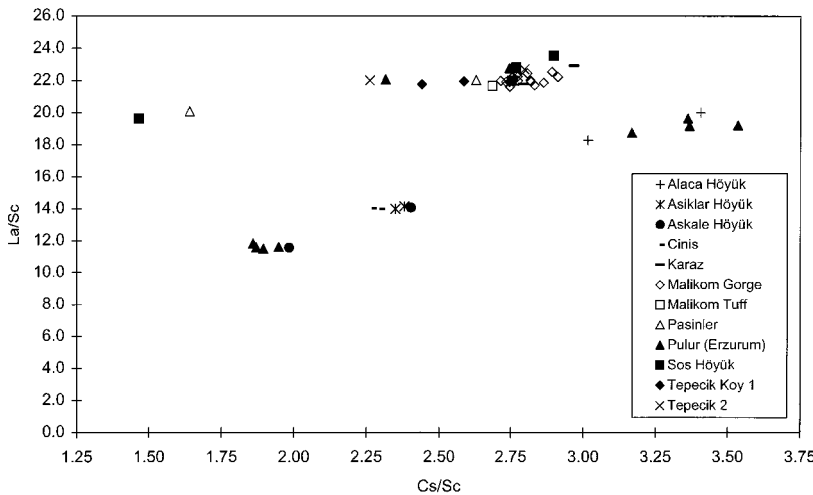


Fig. 8. Caesium/Scandium versus Lanthanum/Scandium plot of obsidian samples from the Erzurum area (for analyses see Table 1).

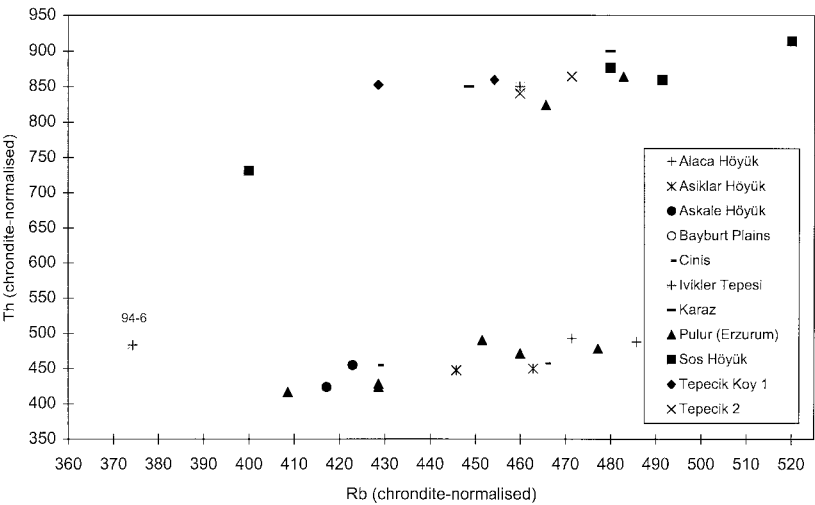


Fig. 9. Chondrite-normalised Rubidium versus Thorium plot of obsidian samples from the Erzurum area and Bayburt Plains (for analyses see Table 1). The factors of Thompson, 1982 were used for the normalisation calculations.

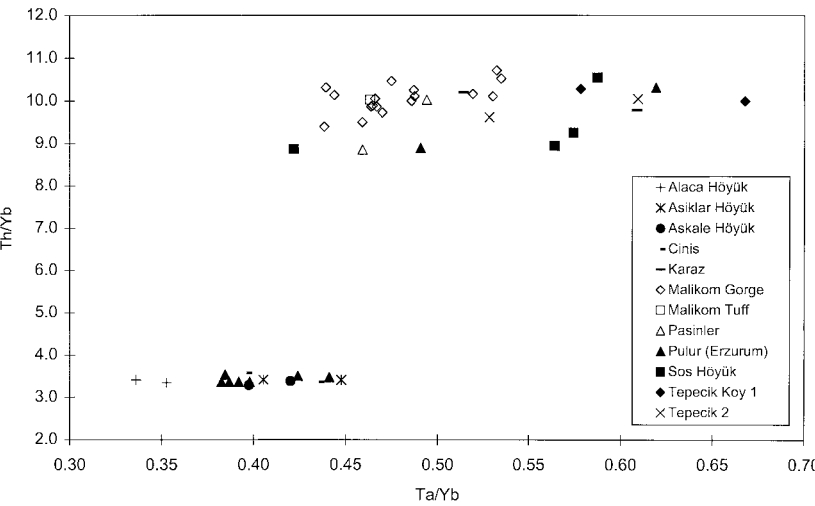


Fig. 10. Tantalum/Ytterbium versus Thorium/Ytterbium plot of obsidian samples from the Erzurum area (for analyses see Table 1).

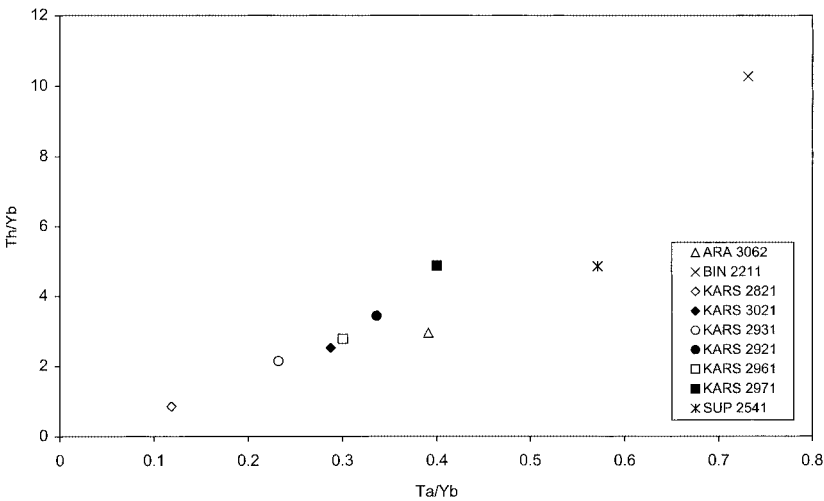


Fig. 11. Tantalum/Ytterbium vs. Thorium/Ytterbium plot of dacite and rhyolite samples from Eastern Turkey (for analyses see Pearce. *et. al.* 1990, Table 3).

Petrographic Analysis of Early Transcaucasian Ceramics from the Bayburt Region, North Eastern Anatolia: An Exploratory Study

Stephen BATIUK

Department of Near and Middle Eastern Civilizations

4 Bancroft Avenue

Toronto

Ontario M5S 1C1

CANADA

E-mail: stephen.batiuk@utoronto.ca

Abstract

*Petrographic analysis is a frequently used form of materials analysis in archaeological investigations. Works has begun on a petrographic characterization of the Early Transcaucasian Wares from the Bayburt Region in an effort to provide a general characterization of the wares, as well as identify exotic or imported wares, and examine patterns in the ceramic industry. This article presents the exploratory results of this investigation, and provides evidence for the characterization of the ceramic industry of Early Transcaucasian Culture of the Bayburt region. The discovery of grog tempering provokes discussion on the larger question of migration in regards to the Early Transcaucasian culture which is discussed.**

This article presents the preliminary results of a petrographic analysis undertaken in order to provide a general characterization of the Early

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Transcaucasian (ETC) Wares of the Bayburt Region.¹ This characterization is being undertaken as part of a larger project of investigation of the methods of production of the ETC Wares, looking at the technology, as well as the changing use of raw materials throughout the larger distribution zone of the Early Transcaucasian culture. Initial observations, albeit preliminary at this point, shed light on the question of the technological characteristics of the ceramics, and are suggestive of the organization of the ceramic industry. As well some observations bear significance on the theoretical debate of migration versus diffusion of cultural style.

Methodology

Petrographic analysis is the examination of the mineralogical and textural composition of ceramics using a polarizing microscope. Each ceramic sample is glued to a glass slide with an epoxy of known optical characteristics and ground down to a thickness of 0.03mm. At this thickness light can pass through most minerals, permitting identification of the mineral inclusions, which are identified by their optical characteristics, such as birefringence, cleavage, and relief. The description and characterization of petrofabrics follow standard conventions. Granulometry is reported using the Wentworth Scale.² with silt inclusions less than 0.06 mm in size; 0.06 to 0.1mm for very fine sand; 0.1 to 0.2mm for fine sand; medium sand from 0.2 to 0.5mm; coarse sand from 0.5 to 1mm, and very coarse sand being between 1 to 2mm. Abundance was measured with standard comparison charts. Inclusions are listed in Appendix A in order of abundance.

Given the large number of the sites uncovered in the Bayburt Region, only the twenty sites highlighted by Sagona as having produced ETC (Early Transcaucasian) wares have so far been investigated. Due to the complexity of the mineralogy of the inclusions, as well as time constraints, generally only one sherd from each site has been characterized so far. There is the obvious problem that the sherd sampled may not properly represent the actual petrofabrics of the site; a problem that was encountered during analysis (see below). Further work on this project will involve a significant increase in the number of samples from each site.

¹ Other terms used to describe this distinctive category of pottery include Kura-Araxes and Karaz. A derivative form found in the Amuq and northern Israel is generally referred to as either Khirbet Kerak or Red-Black Burnished ware. Studies of this culture complex include Burney and Lang 1971, and Sagona 1984. For archaeological investigations in the Bayburt region see Sagona 1989; Sagona, Pemberton and McPhee 1991; Sagona, Pemberton and McPhee 1992; Sagona, Pemberton and McPhee 1993.

² Rice 1987.

Geology of the Bayburt region

The Bayburt plain lies in the Beşpınar valley, which runs northwest – southeast and is situated between the ranges of the Pontus Mountains. In the extreme northwest the plain is bordered by the Balaban Mountains, west of the town of Gümüşhane, and the Zigana Mountains, directly north of Gümüşhane. The massif directly north and northeast of Bayburt is the Soğanlı Mountains, and directly to the south of the plain is the Keşiş Mountains. The area is geologically quite complex. The northern mountains are for the most part composed of upper Cretaceous volcanic facies, and Eocene volcanic facies including granitic and dioritic elements. The southern Keşiş Mountains comprises upper Cretaceous and other Mesozoic rocks, with the exception of the large Paleozoic metamorphic rocks, which make up the Pülür Mountains. The plain itself is a complex mix of Eocene flysch (slates and sandstone), Cretaceous ophiolites, and Pleistocene and Holocene sedimentary deposits.

Analysis results

As stated, the examination of the ETC ceramics from the Bayburt region is in its exploratory phase. The complexity of the local geology has complicated the effort to characterize the petrofabrics groups.

According to Sagona, “the ETC ceramics are handmade and distinguished by a black, brown, or red polished surface. Generally they are poorly baked and are tempered with grits of different sizes”.³ The results of the present research generally concur with Sagona’s preliminary macroscopic analysis. There is, however, a significant degree of variability in the firing of the ceramics, with many being well fired. The cores are usually reduced, even though the exterior is often oxidized. In addition a significant number of samples are under-fired, producing three ranges of colour in the section. “Grits” are quite visible to the naked eye and are poorly sorted. In macroscopic analysis, it would appear that these large grits make up the primary inclusion in variable sizes.

In thin section, the primary mineralogical inclusion of the Bayburt region is felsic to intermediate volcanics comprising of plagioclase feldspar phenocrysts in a groundmass of glass. (Fig. 1) This inclusion has been found in all but one of the samples examined so far ranging in density from 5-40%. The felsic volcanic inclusions are often quite large, sometimes

³ Sagona 1989, p. 427.

reaching 3mm or more in diameter and are quite angular. The angularity suggests that the pieces are for the most part not a natural inclusion, rather the result of crushing and adding to the matrix as temper to aide in the working of the clay.

Plagioclase feldspar is the second most abundant inclusion in the matrix, probably resulting from the disintegration of the feldspar phenocrysts. The plagioclase are generally identifiable by their first order, low grey interference colour and one good cleavage, and a “zebra-like” lamellar twinning in cross-polarized light. (Fig. 2) However, in many of the cases, the plagioclase exhibit zoning, rather than the typical lamellar twinning, a feature that is not uncommon in plagioclase from volcanic rocks.⁴

The third most common inclusion is opaques, probably hematite or hematized magnetite. They are well sorted throughout the matrix and are also found in felsic volcanics. They are generally fine and rounded to sub-rounded. Amphiboles are also commonly found, generally characterized by a pale green colour with pleochroism in plain polarized light, and two cleavages at 120° (large crystal in upper left of Fig. 3). However, like the plagioclase, they are often found in an orientation where the second or even both cleavages cannot be seen. Amphiboles are often found in very close association with, if not actually within the felsic volcanics clasts. However, some amphiboles have undergone an alteration and are more brownish in nature.

Biotite is generally noticeable due to its brown/ green colour and its one perfect cleavage. However, a great deal of the biotite observed in thin section has also undergone some sort of thermal alteration. Biotites, like amphiboles, also appear in the felsic volcanics, but usually in an altered form.

Surprisingly enough, quartz is not very common. It does appear in the felsic volcanics, and appears on its own in the matrix. It is generally fine, clear, and moderately well sorted. However, it could be more abundant than initially observed, as some could be mistaken for non-twinning or zoned plagioclase.

Micritic carbonate is present in a number of samples, but for the most part it is not a major inclusion. Where present it tends to be moderate to fine silt, and well sorted. Talc, muscovite, epidote (often in the metamorphosed of zoisite, seen as the dark in Fig. 4), chlorite, sparry calcite, and serpentine are also found in significant frequency, but never in great concentration (usually 1-2%).

⁴ MacKenzie, Donaldson and Guilford.1982.

For the most part, the minerals observed in the preliminary analysis correspond to the geology of the region. Given the predominance of volcanic facies in and around the Bayburt plain, it is not surprising for the primary inclusion used as temper in the ceramics to be felsic volcanics. The majority of the other mineral inclusions are igneous in nature, and some of these inclusions have undergone some sort of alteration.

Of particular interest was the discovery of grog (crushed ceramic used as tempering material) in the ceramics in thin section.⁵ Initial discussions with Sagona regarding his observation of the ceramics from the Bayburt region suggested that grog was not present in the ceramics. Given the gritty nature of the ceramics, it can be difficult to distinguish this inclusion. It is best visible in thin section. Grog was present in thirteen of the twenty sites sampled. Grog was found to be poorly sorted, angular fragments ranging from 0.5mm to 5mm in size (Figs 5-6, 7). The density of grog in the sherds varied, from two percent to no more than seven percent.

A full characterization of the petrofabrics of the grog itself has not yet been undertaken. However, initial inspection of the samples revealed that some were made of petrofabrics that differed from the matrix of the clay. Additionally, in a few examples, fragments of grog in the same thin section were made of different petrofabrics.

What appears to be a clear example of an “exotic” petrofabric found in a sherd of ETC ware devoid of grog is represented by a sherd from site 48 Çayırıolu Tepe (sample: BS 48.1). The sample contained large pieces (2-3mm in size) of fossiliferous limestone, plagioclase, and very little felsic volcanics (Fig. 8). The Eocene Flysch which are found in the area could be a source of the limestone used as temper in the ceramics. However, the uncharacteristic abundance of fossiliferous limestone and the dearth of felsic volcanics would be suggestive of the sample having come from a different region. Three more sherds were sampled from Çayırıolu Tepe (BS 48.5 and BS 48.6 and BS 48.7)⁶ in order to get a better understanding of the petrofabrics present at the site. The results produced the more characteristic predominance of felsic volcanics (Fig. 9) and amphiboles (Fig. 3). This is suggestive that sample BS 48.1 does not appear to have been produced at the site of Çayırıolu Tepe.

⁵ Mason and Cooper 1999.

⁶ The sample BS 48.7 is the only sample as of yet to be characterized; the others have only had a visual inspection.

Conclusions

The examination of the ceramics from the survey of the Bayburt region has resulted in several important, albeit tentative findings. First, it would appear that each site so far has produced its own distinctive petrofabrics. This observation could, in theory, be seen to lend support for the idea of a cottage industry for ceramic production. This observation is interesting when one looks at Mason and Cooper's work, where the same pattern emerges. Godin Tepe, Sangalan Tepe, and Baba Qasim Tepe, all seem to have produced different petrofabrics.⁷ Given the evidence for these different petrofabrics found for each site, as well as grog inclusions different from the fabric of the ceramics, as well as different petrofabrics among the fragments of grog itself, there is a suggestion of *mobility*. Whether this can be seen as evidence of trading patterns is at present, and probably will never be comfortably possible to say. This pattern of mobility could however, have implications on the debate of migration versus diffusion of cultural style in regards to the ETC culture⁸.

Second, grog was present as a tempering agent in the ETC ceramics of the Bayburt Region. This observation could reinforce the suggestion by Mason and Cooper, that grog tempering might be seen as a technological marker of the ETC culture.⁹ However, much further work must be done to clarify this idea. Specifically, in Mason and Cooper's study, it was possible to isolate chronologically the use of grog tempering to the ETC levels of Godin Tepe (Period IV). Grog tempering was not found in the ceramics of the preceding period, suggesting that with the arrival of the ETC ceramic culture, a different technological approach to the forming of ceramics also emerged.¹⁰ Whether such chronological precision can be attained with survey material for a similar pattern to emerge is difficult at this point to say. Further work will be done to see if such a pattern exists for the Bayburt assemblage. It should be noted that grog tempering is not as ubiquitous in the Bayburt material as it was in the ETC wares of Godin and the Kangavar as noted by Mason and Cooper. However, that the pattern of grog tempering is repeated at all in the ETC ceramics of the Bayburt region is a highly significant find.

The spread of the ETC culture is often linked to a migration and or movement of people. This idea has often been questioned¹¹ and rightly so,

⁷ Mason and Cooper 1999.

⁸ Todd 1973; Yakar 1989.

⁹ Mason and Cooper 1999.

¹⁰ Mason and Cooper 1999.

¹¹ Todd 1973, and more recently Phillip 1999.

as it is very difficult to associate pots in the archaeological record with people. It is furthermore difficult then, to link migrations of people to the archaeological record. Mason and Cooper put forward a very interesting proposal:¹²

Although stylistic attributes may indeed be copied by potters without significant movement of people, the introduction of a new *technological* development may be considered more clearly indicative of the introduction of new individuals to a region. In isolation it does not indicate whether this was a movement of a few individual potters or the population as a whole.

By looking at the patterns of usage of raw materials, as well as the technology behind the production of ETC Wares, further evidence other than semi-tangible stylistic similarities could be mounted for the distribution of ETC Wares representing a migration of peoples. At present the patterns presented here in this exploratory study are insufficient to address this greater question. Further investigation will hope provide additional data to add to our understanding of the Early Transcaucasian culture and what its distribution represents.

Appendix: Bayburt Petrofabrics

Site	Sample*	Petrography
Taşlık	BS 101.2	Medium to very coarse sand of felsic volcanics, plagioclase, amphiboles, epidote, micritic carbonate, grog.
Pülür Tepe	BS 68.3	Fine to very coarse sand of felsic volcanics, plagioclase, amphiboles, opaques, olivine, grog
Sirakayalar I	BS 23.4	Fine to medium coarse sand of felsic volcanics, fine quartz, opaques, amphiboles, grog.
Pülür Tepe (Danışment)	BS 29.2	Silt and fine sand of micritic limestone, plagioclase, fine quartz, grog, fine sand of felsic volcanics.
Karaköy Höyük	BS 102.1	Fine to medium coarse sand of felsic volcanics, zoned plagioclase, epidote, biotite, micritic carbonate, fine quartz, grog.
Karaçayır Mevkii II	BS 59.2	Fine to very coarse sand of felsic volcanics, plagioclase, opaques, muscovite, micritic carbonate, grog, olivines.
İvikler Tepesi	BS 89.1	Medium coarse sand of felsic volcanics, micritic carbonate, plagioclase, amphiboles, biotite, muscovite, grog.

¹² Mason and Cooper 1999.

* BS stands for Bayburt survey, whereas the numbers before and after the decimal point refer to the site number and sherd number respectively.

Han Daresi Mevkii II	BS 78.2	Medium to very coarse sand of felsic volcanics, plagioclase, opaques, amphibole, epidote, sericite, olivine, zoisite, grog.
Han Daresi Mevkii III	BS 74.5	Fine to medium sand of felsic volcanics, plagioclase, amphibole, muscovite, schist, epidote-zoisite, opaques, micritic carbonate, chlorite, grog.
Dedcik	BS 66.2	Fine to medium sand of felsic volcanics, plagioclase, micritic carbonate, opaques, amphibole, biotite, muscovite, talc, actinolite?
Çengiler Tepe	BS 97.6	Fine to medium fine sand of felsic volcanics, biotite, plagioclase, opaques, muscovite.
Çayıryolu Tepe I	BS 46.4	Medium coarse to coarse sand of felsic volcanics, amphiboles, plagioclase, opaques, grog.
Çayıryolu Tepe IV	BS 49.2	Fine sand to medium coarse sand of felsic volcanics, amphiboles, plagioclase, opaques.
Çayıryolu Tepe III	BS 48.7	Fine to medium coarse sand of felsic volcanics, plagioclase, quartz, amphibole, opaques, hornblende, olivine.
Çayıryolu Tepe II	BS 47.4	Fine to medium coarse sand of felsic volcanics, plagioclase, opaques, fine quartz, muscovite, basalt, sparry calcite, grog.
Ali Meydani III	BS 73.3	Coarse sand of felsic volcanics, micritic carbonate, fine quartz, amphibole, micritic carbonate, chert, grog.
Ali Meydani I	BS 75.2	Medium to very coarse sand of felsic volcanics, amphiboles, plagioclase, opaques.
Çayıryolu Tepe III	BS 48.1	Coarse to medium coarse sand of fossiliferous limestone, micritic limestone, plagioclase, felsic volcanics.
Dedcik	BS 66.8	Coarse sand of felsic volcanics, quartz, plagioclase, opaques, amphiboles, epidote, muscovite, micritic carbonate, talc.
Dedcik	BS 66.6	Coarse sand of felsic volcanics, quartz, plagioclase, opaques, amphiboles, epidote, muscovite, micritic carbonate, serpentine.
Çayıryolu Tepe II	BS 47.1	Fine to medium coarse sand of felsic volcanics, micritic carbonate, plagioclase, opaques, fine quartz, schist, serpentine, argillite.

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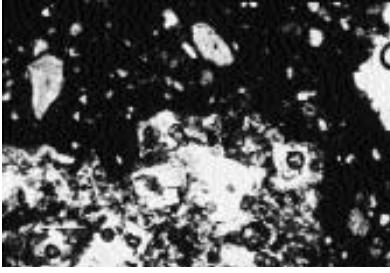


Fig. 1: Photomicrograph of ETC sherd from İvikler Tepesi, Bayburt region containing Felsic Volcanic phenocryst. (Sample: BS_89_1) Plain polarized light, width of field of view about 4.5mm



Fig. 2: Photomicrograph of plagioclase and felsic volcanic phenocryst. Han Daresi Mevkii II (Sample BS_78_2) Cross polarized light, width of field of view about 4.5mm.



Fig. 3: Photomicrograph showing amphibole (Large Crystal in upper left) with plagioclase and microphenocrysts of felsic volcanics. From Çayırözü Tepe III (Sample: BS_48_6) Plain polarized light, width of field of view about 4.5mm

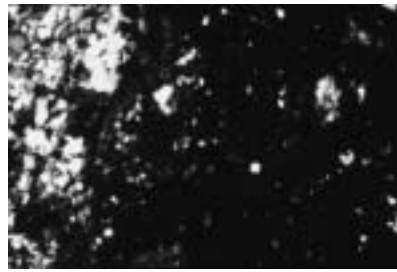


Fig. 4: Photomicrograph showing zoisite (Dark patch center left) attached to a phenocryst of felsic volcanic. From Han Daresi Mevkii II. (Sample: BS_78_5) Width of field of view about 4.5mm

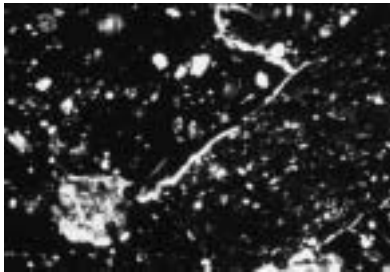


Fig. 5: Photomicrograph showing large angular piece of grog, with micritic limestone. From Pülür Tepe (Danışment). (Sample: BS_29_2) Cross polarized light, width of field of view about 4.5mm.

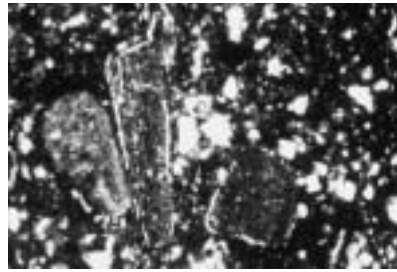


Fig. 6: Photomicrograph showing several pieces of grog surrounded by plagioclase, carbonate. From Han Daresi Mevkii III. (Sample: BS_74_5) Plain polarized light, width of field of view about 4.5mm.

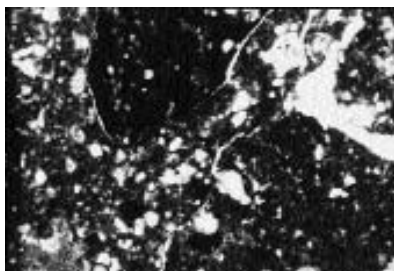


Fig. 7: Photomicrograph of two moderately large pieces of Grog surrounded by plagioclase and micritic limestone. From İvikler Tepesi. (Sample: BS_89_1) Plain polarized light, width of field of view about 4.5mm.

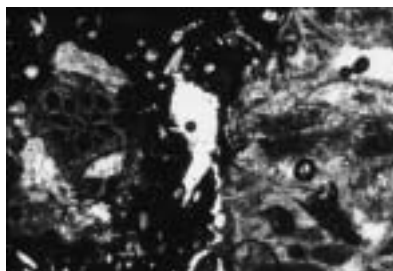


Fig. 8: Photomicrograph of fossiliferous limestone with fossils visible (upper left). From Çayırözü Tepe III (Sample: BS_48_1) Plain polarized light, width of field of view about 4.5mm.

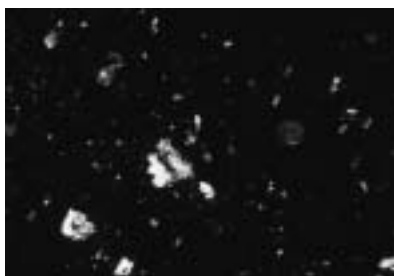


Fig. 9: Photomicrograph of micro-phenocryst of FV, plagioclase, epidote. From Çayırözü Tepe III. (Sample: BS_48_5) Cross polarized light, width of field of view about 4.5mm.

A Twin Calendrical System at Emar and its Implications for the Israelite Calendar*

Murray R. ADAMTHWAITE

Department of Ancient History
University of Sydney
NSW 2006
AUSTRALIA

E-mail: adamthwaite@optusnet.com.au

Abstract

From the relatively few economic and juridicial texts from Emar bearing a date reference it is possible to construct a menology of twelve months, which can then be compared with the menology discernible from the ritual texts, already studied by Cohen. From this comparison it is clear that while there are some month names in common, others differ. This phenomenon raises the suspicion that two calendars operated at Emar, a cultic, and a "civil". Further questions arise, in particular whether the new year for each was different, and what the order of the months was. While the latter question cannot finally be resolved on present information, comparison with other Near Eastern calendars can assist in constructing at least a provisional menology. Finally, it has long been debated whether pre-Exilic Israel likewise had two calendars. The evidence from Emar provides at least some analogical weight in favour of this conclusion.

In the many corpora of Emar texts, from both the official excavations and also those emerging from antiquities markets, a small but significant

* This article adopts the *sigla*, as in the Chicago Assyrian Dictionary, Vol 5, and in addition the following: *ASJ*: Acta Sumerologica Japonica; *AO*: Aula Orientalis; *AOSr*: D. Arnaud, 'Textes syriens de l'âge du bronze récent.' *Aula Orientalis-Supplementa*, Barcelona, 1991; texts are denoted by *AOSr* followed by publication number; *HCCT*: Hirayama Collection of Cuneiform Tablets, published in *ASJ* 12, (1990) pp. 177-227; *ASJ* 13 (1991) pp. 275-333; *ASJ* 14 (1992); *ASJ* 16 (1994) pp. 289-310; *ISBE*: Bromley, G. W. (ed.), International Standard Biblical Encyclopaedia, Grand Rapids, 1979-88; *RE*: Beckman, 1996; texts denoted by RE plus publication number; *RK*: Sigrist, 1993; texts denoted by RK plus the publication number; *SMEA*: Studi Micenei ed Egeo-Anatolici. Texts published in Vol. 30 (1992), pp. 195-245, denoted by SMEA followed by publication number.

minority of texts bear a date formula, *i.e.* with a month name and, usually, a year eponymn. However, the latter is not always the case and the present writer has argued elsewhere that the eponymn system was used at Emar only in the earlier phase of Hittite administration.¹ It is the task of the present study to gather the available data in order to construct, as much as is possible, a coherent menology for the Emar society. In pursuing this study, the important work of Cohen² on Ancient Near Eastern calendars in general, and that of Emar in particular, has been of considerable value. Therefore, the task has been to specify the Emar calendar more precisely.

Phenomena of the Emar texts

A survey of the published texts reveals that only a minority (less than 10 per cent) are dated, but from the thirty-three dated legal and economic texts so far attested a calendar can be ascertained and constructed from date notations. Before proceeding, notice must be taken of three notations according to the Babylonian calendar, which occur in the small sub-corpus **Emar VI 23–29**, from *Maison AV*, but nowhere else. The month names in this corpus are Kislim (GAN.GAN.È)³; Tašrit (*Ta-aš-ri-ti*)⁴; and Ellul (KIN).⁵ Since this very sub-corpus is from the business records of a particular family, and is for other reasons unique it will not occupy our attention here.

1. *Legal and Economic Texts*

It is true that a corpus of omen texts from Emar have a menological format, and these are according to the standard Babylonian calendar.⁶ Meanwhile, all other month names in the total corpus of legal and economic texts, where they occur, are those of Emar, and possibly a wider region of North Syria, hence the omen texts yield no help in the present inquiry. From all the other dated legal, administrative, and economic texts a calendar emerges having twelve months, which for the present is as follows (in alphabetical order):

¹ Adamthwaite, forthcoming. See also Yamada, 1996, pp. 297–304 for an alternative view of the Emarite eponymn system.

² Cohen, 1993.

³ Arnaud 1986, (hereafter Emar VI plus text number, as noted in the forthcoming publication [*supra* n.1]).

⁴ Emar VI 28.

⁵ Emar VI 26.

⁶ Arnaud 1987, texts 610–15, pp. 207–39 (hereafter Emar VII/4).

Name	Notations	Texts
1. Aba'u (Ab)	one	Emar VI 15
2. Adama	three	Emar VI 110; AOS _I 16; 17
3. Ba'al, ^d EN	two	Emar VI 162; 171
4. Halma	one	ME 105
5. Hiaru	one	ASJ88 G
6. Liliatu	one	Emar VI 125
7. Lord of Halab	four	AOS _I 15; 87; RK 6; RE 71
8. ^d Malikkunu	one	HCCT 34
9. Ninkur ("of the throne") ⁷	six	Emar VI 13; 148; 150; AOS _I 19; 69; ME 104 ⁸
10. Niqalu	one	Emar VI 144
11. The gods	three	AOS _I 6; 8; 63
12. Za/er'atu	two	AOS _I 18; HCCT 33

Three other texts either bear the sign ITI at the beginning of the relevant line, or can be plausibly restored, but the month name remains unpreserved: **Emar VI 4**; **Emar VI 12**; and **HCCT 2**. Yet another text, designated by Arnaud as a '*billet administratif*'⁹ but the obverse of which is missing, bears the date ITI ^dZa-ba-b[a].

This last text could be explained in one of three ways:

- (i) Because at least two of the texts in this corpus originate from Tell Munbaqa,¹⁰ it is possible that this small text likewise originates from there. The logographic spelling of Zimri-Dagan, ¹LI-^dKUR, differs from the normal syllabic spelling *Zi-im-ri*-^dKUR at Emar.¹¹
- (ii) Another possibility is that being a small administrative text, it may for business purposes, be using the calendar of its client, analogous to the similar texts of the corpus **Emar VI 23–29** which use the standard Babylonian calendar, for the same reason. However, the closest parallel to this name is the fourth month Zibnum at Eshnunna and the Diyala region.¹²

⁷ This appellative appears in Emar VI 13: ^dNin-kur ša GU.ZA; Emar VI 150: ^dNin-kur ša ku-us-sí; and AOS_I 19: 32: ^d[Nin-kur š]a ku-sí. Arnaud acknowledges that the restoration in the last case is indebted to Emar VI 150, AOS_I, p. 51.

⁸ As noted in the Introduction, this text is reproduced in *ASJ*, 12 (1990), pp. 20–2 as HCCT 12, but Tsukimoto has missed the date reference in line 34. Arnaud's reading is therefore adopted.

⁹ SMEA 26: 4.

¹⁰ SMEA 11, cf. Arnaud's comment on p. 216; the text in the appendix, pp. 228–9, is known to be from Munbaqa, and bears the number 79 MBQ 15.

¹¹ Cf. Emar VI 205: 28; HCCT 21: edge; AOS_I 40: 1, 5, 12, 15. See also DUMU *Zi-im-ri* in DM 1: 23.

¹² Hunger 1976–80, p. 301.

- (iii) If it is held to belong to the menology of Emar, however, it may just possibly be compared with the month *dbh/zbh* at Ugarit.¹³ According to this view, it must be an alternative name for one of the months cited above.

On balance, any of these alternatives is possible; if a preference is proposed the second may have the edge.

Because these notations arise from the legal or economic corpora, and most of these are certainly from Emar, a convenient shorthand will designate this as the civil calendar. However, at this stage, this is not meant to indicate any more than a list distinct from that emerging from the ritual texts. Also, it should be observed that the general provenance of at least some of the unofficial texts is somewhat problematic. This should remind us that the Emar calendar may not only have been specific to Emar, but enjoyed more widespread use in the Middle Euphrates.

2. *Ritual Texts*

When we turn to the ritual texts we also observe the mention of month names, some of which differ from those of the civil calendar. Therefore it is possible that a specific cultic calendar was used at Emar alongside the civil one, even if it is only a matter of alternate names in certain cases, though this point will be explored more fully below. An inspection of Cohen's collation reveals that he has looked for the most part at this body of evidence; likewise, Fleming's study has in the nature of the case concentrated on the ritual texts.¹⁴ To redress the balance, a comparison between the cultic calendar ascertainable from the ritual texts and the one that emerges from the legal-economic texts is in order. The relevant examples of the former are, in particular, those giving details of the *zukru* festival, in this case the substantially complete texts of **Emar VI 373** and also **Emar VI 375**. In addition, there are the texts which Arnaud designates as '*les ordo liturgiques annuels*', **Emar VI 446–50**. Another important group of texts sets out the various monthly liturgical orders, **Emar VI 452–9**, all of which except the first are fragmentary. Finally, the evidence of a small cultic offering text is of value, *inter alia*, for determining the first month of the calendar.

From these ritual texts, the following 12 month names appear (again in alphabetical order):

¹³ Deitrich, *et al.* 1974, p. 29. The identity of *dbh* and *zbh* is not fully established.

¹⁴ Fleming, 1999.

Name	Reference
1. *Z/SAG.MU	Emar VI 364; 373; 454; 455; 459
2. Abiḥe (= Abû)	Emar VI 452: 1; 456: 2 (note Emar in line 3)
3. ^d Adama	Emar VI 446: 12', 83'
4. ^d Anna	Emar VI 446: 77'
5. ^d EN (<i>bi-ta-ri</i>) [†]	Emar VI 448: 19'
6. ^d Halma	Emar VI 446: 95', 101', 106'
7. Lord of Halab	Emar VI 448: 21'
8. *Marza-hanu	Emar VI 446: 85', 86', 90'
9. ^d Ninurta	Emar VI 450: 2
10. Niqalu	Emar VI 364: 2; 373: 185'
11. ^d Ninkur(ra)	Emar VI 446: 58'
12. Zer'atu	Emar VI 375: 3; 447: 6

* Not occurring in the civil calendar.

† The line reads more fully, *i-na* ITI.KĀM ^dEN *bi-ta-ri*. Whether the latter epithet is part of the month name is not entirely clear.

For convenience of reference, just as the former list is referred to as the civil calendar, the latter is likewise referred to as the cultic calendar; again, this should not be taken as itself indicating any firm theory. A comparison of this list of twelve with the previous list reveals numerous correspondences, but also some curious anomalies not present in the civil calendar, viz. SAG.MU, Anna, ^dEN (possibly), Marza-hanu, and Ninurta. These could be alternative names for certain months or part of a distinct cultic calendar, albeit sharing some names with the civil calendar.

Month names occurring elsewhere

Before dealing with these non-correspondences, attention must be given to an examination of the names in the civil calendar. All but five of these are found also in the calendars of other second millennium Syrian centres; the remaining five names seem to be unique to Emar. Names corresponding to those elsewhere are Abû, ^dAdama, ^dHalma, Hiaru, Liliatu, possibly ^dMalikkunu, and Niqalu. These are now discussed in turn.

Abû: This month is attested at Emar with three different spellings: Abiḥe,¹⁵ Aba'u,¹⁶ Aba.¹⁷ The laryngeal 'ḥ' in the first example would be here a weak phoneme, differing little from the glottal stop. This name occurs

¹⁵ Emar VI 452: 1.

¹⁶ Emar VI 15: 35.

¹⁷ Emar VI 456: 2.

fairly commonly, apart from but probably deriving from the fifth month of the standard Babylonian calendar (Abu, NE.NE.GAR). It is also attested in Syria, Northern Mesopotamia at Mari (Abum), where it occupies fourth position, and at Chagar Bazar (Abum).¹⁸

^dAdama: While not attested so far in second millennium texts, the month name *^dA-dam-ma-um* occurs in the third millennium Ebla calendric texts,¹⁹ which appears to equate to the Emar name. It occupies ninth position in the Eblaite calendar, where its meaning seems to be ‘man’, albeit deified.²⁰

Ba’al, ^dEN: The logogram EN is regularly transliterated Bēlu in the many proper names from Emar, cf. Ba’al-bēlu (*^dIŠKUR-EN*).²¹ Unusually for Ebla, where logograms are frequent, there is a syllabic spelling. Notwithstanding this, ITU *^dEN* at Emar most likely corresponds to Eblaite ITU Be-li, the first month of the Ebla calendar according to Pettinato.²²

Halma: This equally interesting parallel also comes from Ebla, where the sixth month is *Hu-lu-mu* or *Hur-mu*,²³ which probably equates to *^dHalma* at Emar.

Hiaru: This Semitic name, apparently part of the Emarite calendar given the explicit mention of Emar in the fragmentary text ASJ88 G: 13, occurs in three other places: Nuzi,²⁴ Alalakh,²⁵ and Ugarit where it occurs as *hyr*.²⁶ In Nuzi and Ugarit, Hiaru was the second month, about April–May on the modern calendar.²⁷ Because the name is probably derived from the Babylonian Ayaru,²⁸ also the second month, it is possible that Hiaru was also the second month at Emar.

Liliatu: This also appears at Mari in various spellings: *Li-il-li-a-tim*; *Li-li-ia-tim*; or *Li-li-a-tim*; and is the ninth month in the calendar.²⁹ Cohen entertains the possibility that this was not a native month in the Emar calendar;³⁰ however, the text is a fairly typical Emarite sale contract. The

¹⁸ Hunger 1976–80, p. 301.

¹⁹ Pettinato 1974–7, p. 28; Hunger, p. 302.

²⁰ Shea 1981, p. 65–6.

²¹ AOS1 13: 31; 60: 5; 72: 32; & *passim*.

²² Pettinato 1974–77, pp. 29, 32 & 34. Shea 1981, p. 60 expresses the view that Beli may refer to the king who took the throne at the beginning of the seven-year period.

²³ Pettinato 1974–77, pp. 30, 32 & 34. Pettinato explains their equivalence by the phonetic shift of l to r.

²⁴ Gordon & Lacheman 1938, pp. 56–8.

²⁵ Wiseman 1953, AT pp. 4–5; AT 6: 35.

²⁶ Oliver 1971, p. 41; Oliver 1972, pp. 57–8; de Tarragon 1980, pp. 21–2 and refs.

²⁷ Oliver 1972, p. 59; de Tarragon 1980, p. 21; Hunger 1976–80, p. 302.

²⁸ Gordon & Lacheman 1938, p. 57.

²⁹ Birot *et al*, 1979, p. 272 & refs.

³⁰ Cohen 1993, p. 345.

witnesses are the king, Pilsu-Dagan, and other members of the royal family; others bear standard Emarite names, with the elsewhere familiar Belu-malik as the scribe for the contract. The single attestation so far would appear to be an accident of preservation and discovery, as with Malikkunu or Hiaru.

^d*Malikkunu*: A month name Malkanum, spelt *Ma-al-ka-nim* or *Ma-al-ka-ni*, also occurs at Mari as the second month.³¹ It could be a variation, as Tsukimoto believes,³² although unconfirmed.

Nigalu: This is attested in a ritual text from Ugarit as *b yrh n[ql]*, albeit in a restoration, and there are other references to this month name in economic texts.³³ The same name is attested at Alalakh, where Wiseman's *li-qa/ga-ši* should probably be read as *ni-qá-lì/ni-qá-lim*.³⁴ Cohen adopts Wiseman's transliteration and raises the possibility that *li-qa-ši* is related to *lqš* in the Gezer calendar.³⁵ However, since Gibson observes that *שקל* in **Amos 7:1** should mean the 'spring pasture' of March and April, appeal to that quarter may be irrelevant.³⁶ Meanwhile, its calendric position at Alalakh is unknown and that at Emar will be discussed below. The name also occurs in the Diyala region with the spelling *Nig-gal-lim*.³⁷

Although the calendric positions at these other localities, where known, have been indicated above, this is not to say that the corresponding months occupy the same positions at Emar. They clearly do not, in the light of further evidence to be presented below. For example, Malkanum occupies second place at Mari, but there is an argument for placing Hiaru in this position at Emar, at least for the civil calendar. However, in the midst of the variation, even in neighbouring localities, Emar's calendar is clearly an aggregation of elements from several Syrian calendars, but appears especially to belong to the tradition of Ebla, with some local input. The endurance of three Eblaite month names from a time long predating Hittite Emar gives some support to Arnaud's tribal hypothesis, whereby the population of the town represents a new sedentary community, only recently emerged from a semi-nomadic past. However, it applies equally well to a long-standing urbanized culture with roots in the distant past. This observation has some bearing on the origins of kingship at Emar, *i.e.*

³¹ *Ibid.*; Hunger 1976–80, p. 301.

³² Tsukimoto 1991, p. 300.

³³ de Tarragon 1980, p. 26–7 & refs.

³⁴ AT 256: 29. Cf. CAD, N, Vol II, p. 214. See also texts AT 51: 5; 255: 15. Since the latter occurrence attests *-še* as the final syllable, it casts some doubt on this reading.

³⁵ Cohen 1993, p. 343.

³⁶ Gibson 1971, p. 3.

³⁷ CAD, *loc. cit.* (*supra* n. 33).

that the Emarite infrastructure is best explained by a long-standing tradition of administration by the temple and the elders, in which kingship was a recent innovation.³⁸ For the present, Emar's links with a long calendric, and thereby religious, tradition of North Syria are clear.

With regard to non-correspondences between the two Emarite calendars, either these are alternative names in the same calendar, in which case there is no separate religious calendar, or they are part of an older religious calendar. None of the Emarite names are Hurrian, unlike that which prevailed at Alalakh, where some month names are Hurrian, *e.g.* *ḫudizzi* or *attana*, while some are Semitic, *e.g.* *šamme* and *ḫiari* (on which more will be said below).³⁹ Similarly, at Nuzi alternative Hurrian and Semitic or Babylonian names occur, *e.g.* *Šehali ša Tešup* and *Tammūzu* respectively.⁴⁰

The apparent discrepancy should not be overestimated. Five month names of the legal-economic calendar do not correspond directly to anything in the ritual list, *viz.* Ba'al, Hiaru, Liliatu, The gods, and Malikkunu; but the remainder do correspond. The conclusion seems to be that these names in the first list are alternatives to the non-corresponding names in the second. Approaching the problem from the opposite direction, four names in the ritual list not corresponding to those in the first list, *i.e.* SAG.MU, Anna, Marzaḫanu, and NIN.URTA, must likewise be alternatives to names in the civil calendar. We may compare this phenomenon to the one at Ebla where, for example, the fourth month is designated *d'ù-da* and a-nun-nun, and the fifth as *er-me* and NI-la-mu respectively.⁴¹

The number of months

The above reasoning has so far assumed that the Emar calendar had twelve months. This is based not only on the total number of names emerging from each class of texts, but more particularly on parallel evidence from all other ancient calendars. As is well known, all ancient cultures so far investigated used the lunisolar year, calculated as twelve lunations of 29 1/2 days each. The standard Babylonian calendar had twelve months, as did those of Eshnunna, Nuzi, and Mari. There is no reason to believe that Emar was any different.

³⁸ This position is argued in my forthcoming thesis, part C, chapters 1 & 2.

³⁹ Wiseman, 1953, p. 5.

⁴⁰ Gordon and Lacheman 1938, p. 60.

⁴¹ Pettinato 1974–77, p. 35.

The months in order

Since Cohen's view is that SAG.MU was a month name in its own right, following its status as such elsewhere, he further concludes that, according to **Emar VI 373**, *Za/eratu* preceded and *Niqalu* followed it. The result according to this reading is that *Zeratu*, SAG.MU and *Niqalu* occupy positions twelve, one and two respectively.⁴²

Although such an interpretation is plausible, it is nevertheless premature, as is indicated by the following considerations:

- (i) For Cohen, *Zer'atu* and *Niqalu* are months other than SAG.MU, the last being a name in its own right. In regard to the ritual calendar this is probably correct, but in the case of the civil calendar this cannot be correct because there are 12 names, one of which must be the first month.
- (ii) The exhaustive analysis of the ritual texts by Fleming came too late for Cohen's study, but Fleming has shown convincingly that there is repetition in the structure of the *zukru* text **Emar 373**⁴³. This in turn entails a parallelism between lines 36ff and lines 191'ff, both of which prescribe procedures for the first month, in each case for the 14th and 15th days. This being so, the previous section (lines 174' to 190') prescribes for the sixth year, first for the month SAG.MU (lines 174' to 184'), then for the month *Niqalu*, which would lie somewhere between then and the next New Year, but not necessarily in second position (lines 185' to 190'). Equally, this observation would seem to preclude Fleming's suggestion that *Niqalu* should be equated with the first month.

An alternative interpretation is now proposed whereby both the ritual and the legal-economic texts are duly considered.

I. Emar 446

Among the ritual texts, one in particular is a prime source of both month names and their order. This text sheds light on the twin problems of the correspondence of the two calendars, as surveyed above, and the order of the months, both of which are interconnected. The text in question is in the annual liturgical *ordo* (Arnaud's classification), **Emar VI 446**, where a total of six months of the calendar are mentioned ahead of a detailed set of procedures for that month, the specific days being also stipulated. The ritual for the first month is by far the longest, probably because it is the New

⁴² Cohen 1993, p. 343.

⁴³ Fleming 1999, pp. 16-19.

Year⁴⁴, while those for subsequent months are shorter. The text puts the months in the following order:

[ITI ZAG.MU..]?	l. 1–2
ITI ^d NIN.KUR.RA	l. 58', 59'
[IT]I ^d An-na	l. 77'
ITI ^d A-da-ma	l. 82', 83'
ITI Mar-ḥa-za-ni	l. 85', 86', 90'
ITI ^d Hal-ma	l. 95', 101', 106'

This list at once gives us a provisional order for six of the months, and narrows the range of options. Two of the three anomalous months mentioned above, viz. Anna and Marzahani, are distinguished from the other names also occurring in the civil list in this same text. In this regard Marzahani could be an alternative to Malikkunu, but this is little more than conjecture.

Unfortunately, the beginning of the text is damaged. Arnaud restores [ITI ZAG.MU..] in line one, and translates '*Le mois du Début de l'année*',⁴⁵ after attested parallels in other ritual texts. Apart from the internal logic of the text, his appeal seems to be to the text already discussed, **Emar VI 373: 36, 175', 191'**, where ITI Z/SAG.MU is followed by references to the 14th day (l. 37) and the 15th day (l. 42) of the month. This assumes in text **446** a sequential order beginning from the first month. The first assumption seems reasonable, as does the second, given the prominence of the first month in the ritual texts generally.⁴⁶ Fleming goes further and adopts the view of a strictly consecutive order.⁴⁷ The problem is whether this list is indeed consecutive or distributed over the full year. If the former possibility is adopted, the remaining months would simply come after these in unknown order, but this cannot be assumed and consideration of one month in particular would appear to refute it.

2. *The Month Abû*

The month Abû (Abiḥe, Aba'u in the Emar texts) is variously placed in different calendars: the classic Babylonian calendar places it fifth, at Mari it was fourth, and in Eshnunna it occupied third place.⁴⁸ However, there is an important clue for its position at Emar: the month of Abû falls during the

⁴⁴ Fleming 1992a, p. 202.

⁴⁵ Emar VI 446: 1.

⁴⁶ Arnaud 1986, p. 425; N.B. note to line 1, Emar VI.

⁴⁷ Fleming 1999, p. 14.

⁴⁸ Hunger 1976–80, p. 301.

season of summer fruits according to **Emar VI 452**. This text, a ritual for the dead according to Fleming,⁴⁹ consists of an *ordo* for successive days of the month of Abû. These include offerings which appear to be those of mid to late summer, *e.g.* pomegranates (NU.ÚR.MA.MEŠ, lines 5, 10), and grapes (GEŠTIN.HÁD.DU, lines 2, 5, 7), are both mentioned.⁵⁰ Assuming a spring New Year, this would place the month neatly in about the fifth position, in concord with the Babylonian scribal tradition evident at Emar. An autumn New Year at Emar would therefore not coincide with the grape harvest and the only way to retain an autumn New Year would be to posit Abû as the first or, at a stretch, the second month, which conflicts with the evidence available to date. Therefore we may tentatively place Abû at fifth position. This in turn rules out a strict sequential approach to the Emar 446 *ordo*.

3. Identity of the First Month

Zer'atu as first month

This remaining problem can be addressed in part by further examination of the liturgical text **Emar VI 446**, in particular the first line, whereas in **Emar VI 373**, a restoration is required. The issue of this restoration depends on the identity of the first month, but on present information this question cannot finally be settled. Apart from the scheme offered by Cohen, the reasoning of Arnaud and Fleming is as follows:

- (a) The first clue is the long *zukru* festival text, **Emar VI 373**, which centres around ritual for the New Year on the 14th and 15th days of the month, cf. **Emar 373**: 37, *i-na* IT[I] SAG.M[U]: 'in the first month'. Arnaud restores in lines seven and 14 [*i-na* ITI *Za-ra-tu*]: 'in the month of Zaratu', on the basis of 375: 3 where the same reading is clear.⁵¹ For both Arnaud and Fleming⁵² **Emar VI 375** is an equivalent of text 373.
- (b) The second line of reasoning lies in the meaning of the name Zer'atu, apparently deriving from *zēru*: 'seed' (Heb. זֶרַע Aram. זֶרַע), and the connection of this with the New Year in the *zukru* festival. Thus Fleming sees a reference to the first month and seeding in **Emar VI 446**:

⁴⁹ Fleming 1992a, pp. 295–301.

⁵⁰ Cf. the same combination in Numbers 13: 23.

⁵¹ Emar VI, p. 365; Cf. Emar VI 375: 3.

⁵² Fleming 1992a, pp. 202 (see also his discussion of these two texts on p. 206, note 12); Fleming 1992b, p. 61 & note 16.

51.⁵³ Arnaud reads here LÚ.MAŠ.ŠU.GÍD.GÍD NUMUN.MEŠ *i-na* KI *i-na-di* NINDA x: ‘the diviner scatters seed on the ground. The bread...’. Fleming reads the last five signs *i-na* SAG.M[U: ‘the first month’, but this is doubtful from the cuneiform drawings. He appears to see scattering of seed as a ritual for the first month, hence Zer‘atu would be the first month. Fleming also appeals to the seven ‘men of the seed’ (7 LÚ.MEŠ *z[e-e]r-a-ti*) in Emar VI 373: 38 (partially restored) and 378: 42, who are part of the *zukru* festival in the month of Zer‘atu.⁵⁴ Thus, it seems a fair inference from this correlation of evidence that Zer‘atu was the first month of the Emarite calendar.

Notwithstanding this conclusion there are some difficulties. Because the term apparently derives from *zēru*: ‘seed’, the most likely reference of the name is indeed to the time of seeding. This would make the calendar primarily an agricultural and fertility calendar, but would also make the Emarite New Year coincide with the sowing time, about October–November. Herein lies one possible difficulty with this view: on this scheme the New Year would fall too late by comparison with other calendars which began in the spring.

Although it is possibly overrated in the debate about ancient calendars, a comparison with the famous Gezer calendar (if such it was) is useful here, where the second reference is to ירחו זרע ‘month(s) of sowing’. This would appear to denote an autumn New Year, with the second month at November–December,⁵⁵ but if the Gezer calendar is simply an agricultural cycle, this argument has no force.

Meanwhile, it has been argued from the calendric texts of Ebla that the New Year there began in the autumn and so Pettinato places the opening month, Bēli, in September–October.⁵⁶ However, Cohen reviews the evidence and concludes that Ebla belonged to the mainstream Near Eastern practice that placed the New Year in the spring.⁵⁷ A debatable conclusion at this point should not deter us: if the New Year began in the spring (March–April) and if the name is held to denote seedtime, then Zer‘atu cannot be the first month.

⁵³ Fleming 1992b, p. 62 & note 22.

⁵⁴ *Ibid.*

⁵⁵ Gibson, 1971, pp. 1–3. Note that Gibson rejects the calendric interpretation of the Gezer text; hence no conclusion can be built on its content as to the beginning of the New Year.

⁵⁶ Pettinato 1974–77, pp. 33 & 35.

⁵⁷ Cohen 1993, pp. 14–6.

Another more serious difficulty with Zer'atu as the first month is that **Emar VI 375** appears to come from a separate textual tradition of the *zukru* festival. Fleming argues this principally from the different spelling of the names for Dagan in each, plus the lack of a solid link between **Emar VI 375** and the calendar sequence of **Emar VI 373**.⁵⁸ To elaborate on the latter, the text prescribes a sequence of rituals for *zukru* on the 14th and 15th days of the month of SAG.MU, which do not match those for any part of **Emar VI 373**. Therefore, the restoration of the month name Zer'atu in 373: 7, 14 is doubtful.

Another annual liturgical *ordo*, the fragmentary text **Emar VI 447**, preserves the ritual for the month Zer'atu, in sequence with other ritual unfortunately unpreserved. The cumulative effect of the above material renders it highly doubtful that Zer'atu was the opening month of the year.

Niqalu as first month

Fleming's tentative suggestion of Niqalu as the first month also has its difficulties.⁵⁹ Although it would appear to be the only other serious candidate, further exploration reveals some ambiguity. **Emar VI 373: 174'–194'**, as already observed, prescribes an offering sequence for the sixth year, while in the seventh and following year there is the *zukru* proper; in each case for the first month (*i-na* ITI ZAG.MU). In line 185' the month Niqalu is specified, but the day reference is unfortunately broken. This might indicate that Niqalu was the first month, but it could equally suggest that Niqalu was another month later in the year. Hence, Fleming's suggestion is not conclusive even though there remains a possibility that Niqalu was the first month of the year. Meanwhile, one conclusion does emerge from the above discussion: the Emar year began in the early spring, as did others in the ancient Near East.

ITI SAG.MU as first month

Having rejected the two candidates above, Cohen's conclusion appears the most likely. As far as the ritual texts are concerned, the regular Emarite designation ITI SAG.MU is a term in its own right on a level with the same or similar term (ITI ZAG.MU) in other more or less contemporary cultures, meaning 'beginning of the year'. Because there is no variation in the use of this designation, the text in 373: 7, 14 should be restored as [*i-na*

⁵⁸ Fleming 1992a, p. 230–1.

⁵⁹ *Ibid.*, p. 330.

ITI SAG.MU], in line with the consistent use of this term elsewhere in the ritual texts.

Also, because there are 12 names on the civil calendar, one of the names on that list must correspond to this logogram; however, on the present state of knowledge its identification cannot be certain.

One further observation concerns the beginning of the year. In the above discussion of the month Abû, it was argued that this month belongs to the fifth position, coinciding with the grape and pomegranate harvest. This entails a spring New Year (March–April), *i.e.* at the time of the vernal equinox. As Cohen observes from all the extant textual data, this was the common location of the New Year in the ancient Near East.⁶⁰ This is evident also for the cultic calendar at Emar. Whether the civil calendar proposed in this paper began at the same time is an interesting point to ponder. However, our attention now returns to the cultic calendar as a whole for an attempted reconstruction.

4. Placement of the Remaining Months

The cultic calendar

Three texts in particular provide clues: **Emar VI 446**, **452**, and **455**. The month Abû has been located at fifth place, on the basis of information in **Emar VI 452**, and the order of six of the months is evident from **Emar VI 446**, albeit not in strict sequence. The fragmentary **Emar VI 452** mentions the first month (IT)I SAG.M[U) then three more months, the third of which is ITI *ha-am-ši*: ‘the fifth month’.⁶¹ No other names have been preserved and so the text does not yield any further information by which to resolve the issue of those months following the first. Zer‘atu, the month of seeding, could tentatively be placed as the eighth month (October–November), or possibly the ninth (November–December). Analogy with other calendars may constitute a rough guide for the ritual calendar, but we should note that at Ebla the months Hulumu (eighth) and Adamma (11th) are in reverse order to that given in **Emar VI 446**.⁶²

Although for six of the months the order may be clear from the annual *ordo* of **Emar VI 446**, where to fit the others into the scheme remains an insoluble puzzle. Clearly, from its second position in this text,

⁶⁰ Pettinato 1974–77, pp. 33 & 35.

⁶¹ **Emar VI 454:2’–6’**.

⁶² Following Cohen 1993, pp. 31 & 33.

^dNIN.KUR.RA must come early in the order and we may tentatively place it third. Possibly, analogous to Ebla, the eighth month could be Halma, or the order of Halma and Zer'atu could be reversed; the remainder must remain speculative. If one may be permitted to engage in a degree of speculation, the order may be as follows:

- | | |
|---|--------------------------------|
| 1. Z/SAG.MU | March–April |
| 2. Niqalu | April–May |
| 3. ^d Ninkur(ra) | May–June |
| 4. ^d Anna | June–July |
| 5. Abû (= Abiḥe) | July–August |
| 6. ^d Adama | August–September |
| 7. Marza-hanu | September–October |
| 8. ^d Halma | October–November [†] |
| 9. Zer'atu | November–December [†] |
| 10. ^d Ninurta | December –January |
| 11. ^d EN (<i>bi-ta-ri</i>) | January–February |
| 12. Lord of Halab | February–March |

[†] These may possibly be in reverse order.

The civil calendar

Although the identity of the first month of this list cannot be as certain with certainty, as to the placement of the other months, the same month names from centres other than Emar may here be a guide. Thus, because Hiaru was the second month at both Ugarit and Nuzi in the mid-second millennium, the inference is here made that it was also the second month at Emar.⁶³ This is reinforced if the name is to be derived from the second Babylonian month Ayaru. Liliatum occupies ninth position at Mari and, provisionally, we may locate it similarly at Emar, though displaced to the tenth position because either Halma or Zer'atu occupy the ninth. The assumption is made that the corresponding months of the civil calendar occupy the same positions as in the cultic calendar, with the exception of Hiaru, which is here placed second. If this is correct, the month of Niqalu may tentatively be placed at first position. The result, albeit somewhat speculative, is proposed as follows:

⁶³ Emar VI 452: 1.

Numeration	Modern equivalent	Month names	Remainder, order unknown
1	late March–April	Niqalu	
2	April–May	Hiaru	The gods
3	May–June	^d NIN.KUR (“of the throne”)	Malikkunu
4	June–July		
5	July–August	Abû (Aba’u)	
6	August–September	^d Adama	
7	September–October		
8	October–November	^d Halma [†]	
9	November–December	Zer’atu [†]	
10	December–January	Liliatu	
11	January–February	Bêlu	
12	February–March	Lord of Halab	

[†] These may possibly be in reverse order.

One caveat on this proposed order is, as intimated above, whether this civil calendar began in the spring (March–April) at the vernal equinox, or in the autumn (September–October) at the autumnal equinox. If the latter then the first month, along with the order of some others, would be different. The one anchor is the month Abû, which properly belongs to the July–August period, which in turn suggests that the above table is correct in this respect. On an autumnal New Year, Abû would be the 11th month, but no such conclusion is yet possible.

Implications for the pre-exilic Israelite calendar

The above evidence could well make a contribution to two unresolved problems regarding the Old Testament data on the Israelite calendar. Much has been written on the matter of when the Hebrew year began and whether there were two calendars in operation: an ecclesiastical calendar, and a civil or regnal calendar, the former beginning in the spring, and the latter in the autumn.⁶⁴

The pattern of the Emar calendar suggests a spring New Year for the cultic calendar of Israel. While Clines has rightly warned against inferring too much from ‘patternism’ of this kind,⁶⁵ it remains the case that Emar provides much closer parallels to Biblical festival and priestly ritual than

⁶⁴ See survey in Morgan 1979, pp. 576–8; Cohen 1993, p. 21.

⁶⁵ Clines 1974, pp. 39–40.

occurs, for example, at Ugarit.⁶⁶ A seven-day structure is the feature of the main festivals of Emar, similar to those of the priestly legislation in the Pentateuch. Other details, such as the זכרון of Lev.23:24 and the designation of Emar's first-month festival as *zukru*, also indicate parallels. The *zukru* festival, like Pesah, seems to have been a non-agricultural festival.

As argued above, a firm conclusion from the Emar evidence is that, as in all other ancient cultures, its cultic calendar began in the spring, with the fifth month (Abû) falling around the grape harvest in late summer. This suggests that Israel was not unique in this respect and began its calendar at the same time. This observation is in no way meant to discount the importance of investigating the Biblical evidence itself, as Clines has done, but is useful as a supporting parallel.⁶⁷

The other main issue concerns the matter of two calendars, one cultic and one civil. Thiele, in his celebrated investigation of the Hebrew regnal years, bases his chronology of the Divided Monarchy in part on the assumption of two different calendars during the period, a Nisan–Nisan calendar in the north, and a Tishri–Tishri calendar in Judah.⁶⁸ Meanwhile, critical agendas operate in regard to Israel's festival calendar, since this depends, at least in part, on one's view of the nature of Israel's religion and its derivation.

Clines has argued for a single calendar beginning in the spring.⁶⁹ If the reasoning above is valid, we may posit a parallel between Emar and Israel and argue that a twofold calendar was not unusual in the general heritage of ancient Syria-Palestine, even within the one society and culture. Such a twin system in Israel would, in turn, lend support to this principal tenet of the Thiele chronology. If it can be shown by further investigation that the civil calendar at Emar did indeed begin in the autumn whereas the cultic one began in the spring, a closer parallel to Israel could be asserted, with even firmer implications for Thiele's scheme.

In summary, although it is still too early to be definite on the details of the Emarite calendar, a picture is nevertheless emerging. One thing is certain: the growing number of texts from this site is already proving to be of profound significance for Old Testament scholarship, and will become increasingly so in the years to come.

⁶⁶ As observed by Fleming 1999, pp. 11–4.

⁶⁷ Clines 1974, pp. 22–40.

⁶⁸ Thiele 1983, pp. 45–53.

⁶⁹ Clines 1974, p. 40; Clines 1972, pp. 9–34.

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Considering the Book of *Qohelet* Afresh

Joseph AZIZE

Department of Ancient History
University of Sydney
NSW 2006
AUSTRALIA
Fax: (61) 2 93517760
E-mail: jazi2753@mail.usyd.edu.au

Abstract

There is no compelling or even plausible evidence that Qohelet was written under Hellenistic influence. However, the literature of ancient Western Asia offers clear correspondences to Qohelet. Certain principles for evaluating theories of cultural influence and borrowing are adumbrated.

*A reinterpretation of Qohelet is also offered, which, in some respects, happens to be congruent with ideas current in medieval scholarship. The schoolmen treated Qohelet as a work of spirituality. I suggest that spirituality is far more evident in ancient Western Asia than has generally been allowed. This paper uses a method of 'comparative spirituality' to assist in assessing the plausibility of interpretations of spiritual material, where there is no other evidence as to the soundness of the interpretation suggested.**

This paper suggests that it is timely to consider the book of *Qohelet* afresh. In particular, it suggests that there is an extent to which the popular conclusions as to both *Qohelet's* intrinsic meaning, and the date of its composition, are unduly limiting. The scholarly consensus on these issues has established a mutually supporting nexus of ideas, which are, in my view, individually questionable. The first is that *Qohelet* is a pessimistic work, or at best, one where any reasonable human hopes are limited to what may be enjoyed on earth. The second is that this pessimism is traced to the influence of Hellenism. Having agreed on these two points, that *Qohelet* is

* This article is respectfully and thankfully dedicated to the late George Adie, who was for me the dean of *Qohelet* commentators and much more, and who, unfortunately, never published.

'pessimistic' and was influenced by Hellenistic thought, the work is interpreted ever more closely as if it were a piece of Greek philosophy.¹

There is now sound reason to place *Qohelet* in an eastern context, or rather in its Western Asian context. There is no compelling or even plausible evidence that it was written under Hellenistic influence. The literature of ancient Western Asia, however, offers clear correspondences to *Qohelet*. No such parallel can be claimed between *Qohelet* and a single line in Greek literature.

Certain principles for evaluating theories of cultural influence and borrowing are adumbrated, for it seems to me important that scholars set out their presuppositions so that we may fruitfully discuss our ideas. A re-interpretation of *Qohelet* is also offered which, in some respects, happens to be congruent with ideas current in medieval scholarship. The schoolmen treated *Qohelet* as a work of spirituality. I shall suggest that spirituality is far more evident in ancient Western Asia than has previously been allowed, although recently there has been evidence of a greater appreciation of how elevated Western Asian spirituality could be.²

This essay uses a method of 'comparative spirituality' to assist in assessing the plausibility of interpretations of spiritual material, where there is no other evidence as to the soundness of the interpretation suggested.

The plan of this essay is as follows:

1. Basic issues
2. What does *Qohelet* mean to say?
3. An oral origin for *Qohelet*?
4. The context of *Qohelet*
5. Authorship and date
6. Further questions

1. Basic issues

There is a major problem with the traditional dating and interpretation of *Qohelet*. If it were so late that it represents the strong direct influence of third century BCE Hellenistic philosophies and needed to be made palatable to the orthodox by the additions of one or more pious postscripts, then how did it come to be accepted as canonical at all? The canon was forming at this time, and many scholars believe that the Torah was already fixed if not canonized. In the next century, Ben Sira evidences the development of a canon and is itself too late to be included in the canon.

¹ See for example Schwienhorst-Schönberger 1998.

² In particular, see the introduction to Parpola 1997 and Buccellati 1995.

Against such a background, how could a book recently described as having ‘some disconcerting views’³ be accepted, even by the Qumran community? One modern writer has even been moved to castigate Qohelet as ‘arrogant’ because Qohelet thought that, as he could not understand reality, no one else could do so.⁴ It is not sufficient to assert that this book was accepted because it was thought to have been written by Solomon: not every pseudonymous work was canonized. Why then was it canonized and why do many, even today, still find that this book moves them in strange ways, even if they cannot say why and how? This article attempts to address these issues.

Scholars are not unanimous, but the preponderant view seems to be that *Qohelet* reflects Hellenistic influence. For example, Fox writes that:

The book of Qohelet is dated by most modern scholars to the Hellenistic period, which is to say, the third century BCE.... Qohelet undertakes a sort of philosophical analysis without parallel in the ancient Near East prior to Hellenism. There seems to be a background awareness of Greek thought, sketched in the following paragraphs, though not necessarily direct knowledge of Greek philosophy.⁵

He goes on to refer to Loretz’s work, saying that it ‘... argues against Greek influence by showing differences of detail. But influence is not replication, and such distinctions as he notes are not decisive.’⁶ Fox’s own treatment of the material rests to a significant degree upon Hengel’s *Judaism and Hellenism*.

Before moving on to Hengel’s views, it should be noted that influence can indeed be replication. Fox declares ‘a background awareness of Greek thought’, but forswears the attempt to establish ‘direct knowledge of Greek philosophy’. If influence is asserted but it is not precisely stated where the influence can be found, how do scholars debate the theory? I set out below some criteria that I follow in such endeavours. It seems to me that the starting point is to distinguish between two types of alleged influence: the particular and the general.

Particular influence is demonstrated by similarities between two cultural phenomena so precise that an observer considers that there must have been a borrowing or an influence. Scholars will generally pursue related questions. How was that stimulus received? Was it digested, acclimatized, and developed in the receiving culture? Were certain features of the external influence adopted, but others rejected? Why was the influence welcomed in

³ Blenkinsopp 1995, p. 3.

⁴ Crenshaw 1988, p. 24.

⁵ Fox 1999, p. 6, n. 10.

⁶ Fox 1999, p. 7, n. 11.

that way? What is the significance of this process? For example, we sometimes see slavish copying of foreign models. But was the receptive culture simply producing items for sale to the external culture? Such a phenomenon may explain some of the Phoenician artifacts which display a pure use of Egyptian motifs. These questions ramify into fascinating areas, and it often turns out that no one culture has been completely receptive, that there is some sort of exchange between them, even if at first glance the borrowing was apparently all one way.

It seems to me that there are at least two aspects to the scholarly task of evaluating putative particular, as opposed to general, influences. The first aspect is positive: it is to establish a *prima facie* correspondence. There is an extent to which this is objective: the data to be compared must be established, *e.g.* one sets out passages from *Qohelet* and the Standard Babylonian *Gilgamesh* epic. This necessarily includes establishing, or attempting to establish, the dates of the pieces and the possibility of the influence moving from the parent culture to the receptive one, to demonstrate that borrowing was possible. Then there is an extent to which a subjective element enters. Each scholar must determine whether the alleged similarities strikes him or her as being too precise and individual to be coincidental. In this respect, it is always important to consider the nature of the material to be compared. If the phenomena to be compared are expressions of a common emotion, such as sadness at losing a beloved, then one could expect any affinity to be referable to the common human experience of sadness. However, where the artistic forms or idioms are striking or unusual, the likelihood of borrowing or influence increases.

This is the case for particular lines from *Qohelet* and *Gilgamesh*. Day has demonstrated that not only are there a number of similarities between certain passages in the two texts, but the similarities occur in the same order, and hence the 'dependence of Qoheleth upon Gilgamesh at this point' is fairly securely established.⁷

The second aspect of establishing influence is negative: it is to exclude the possibility of independent innovation or that the influence in question came from yet another extraneous source. That is, having evaluated the similarities between the two cultural phenomena, one should also consider whether there are any other possible sources of stimulus. This in turn has at least two aspects. First, was the putative borrowing direct or indirect? Second, could the cultural phenomenon in question be explained by reference to purely local influences or developments? Has it been attested in an

⁷ Day 1995, pp. 59–60.

earlier form, closer to home? To rephrase this, does one need to hypothesize external influence at all?

The above thoughts relate to evaluating the possibility of specific borrowing or influence. Alleging general influence in the absence of specific correspondences and direct evidence is something quite different, because the *objective* element cannot be *isolated* in the way it can when discussing a specific similarity. For example, if one is contemplating the influence of Ugaritic religion and epic on a particular aspect of the descriptions of the deity in the Hebrew Bible, one can identify individual passages, epithets, phrases and concepts. But to argue that a religious attitude in general was developed under the stimulus of another one, is, in the absence of more or less precise parallels, almost entirely subjective.

Upon what basis does a scholar characterize a particular religious outlook in one way and not in another? The interpretation of religion and spirituality is famously difficult and prone to subjective interference. One invariably has so much material for comparison that the very exercise becomes unwieldy. A good example of this shall be afforded below. The task is especially formidable in ancient history, because there are such gaps in our knowledge that it is often quite difficult to establish which way the influence was going. In the case of *Gilgamesh* and *Qohelet*, this is quite easy: *Gilgamesh* is demonstrably far older and portions of the epic have been located from all over Western Asia, including from the area of modern Israel.

When one alleges a general influence, the first part of the task is still to establish a *prima facie* correspondence. This may be impossible because there could be too much material to place in the scales. On the other hand, it may at times be easier because the existence of the influence may be apparent. For example, the location of numerous Mesopotamian texts in Ugarit proves general influence in certain fields immediately and without equivocation. There is still a subjective element here, because the material needs to be characterized, but on the whole, the matter is theoretically capable of proof, even if evidence may be lacking in certain cases. Further, if scholars do not share their general *impression* of the two cultures or cultural areas being compared, they shall inevitably demand specific parallels. This is rightly onerous upon the asserting party, and arguments of a general influence often fall into obscurity when no clear examples are proffered.

It need not always be so: there is at least one important purpose in postulating a foreign background influence. In my opinion, a general influence may rightly be entertained if it makes explicable that which had otherwise not been, *i.e.* if the theory of external stimulus or patterning enables us to clarify a previous obscurity or inconsistency. A fair example is close to hand

in the discovery of the Ugaritic literature concerning El (Ilu) and Baal. This resource, together with what had already been known, made it apparent that the figure Ilu/El had been assumed into ancient Judaism (if indeed it is proper to speak of 'ancient Judaism' in the Bronze Age) from a pre-existing Canaanite religion. Understanding the role of Ilu in Ugarit made it possible to see how this figure had been absorbed by the figure of YHWH, even though initially YHWH had been subordinate to El in his manifestation as Elyon (Dt 32:8), and had apparently been one member, albeit an eminent one, of a larger pantheon (see in addition to Dt 32:8, Hb 3:5). This literature also made explicable the fragments of a battle with the sea and using Leviathan to nourish the wilderness (Ps 74:13–14), and other elements now understood as representing the assimilation of some of Baal's attributes and history.

Another apposite example is the well-known parallel between *Qohelet* 11:1 and the advice of *Onchšəsongy*, which was, effectively, to throw one's good deeds upon the waters in the certain knowledge that when the Nile flood recedes it will be found again.⁸ The Egyptian context makes explicable what was previously puzzling about Qohelet's advice: why should one find one's bread after many days?⁹

This is related to the second limb of my canon for testing postulated specific influences: the negative aspect, that one must exclude the possibility of local and independent development. Sometimes a specific correlation between Ugaritic and Hebrew material cannot be found, but the general correspondences enable one to extrapolate and offer plausible interpretations on the basis of borrowings from Canaanite religion. Again, this shows that in order to be feasible, theories of general influence should be able to descend to particulars. It seems to me axiomatic that if scholars attempt to establish only 'a background awareness', their conclusions will necessarily be tentative until that theory can shed light on what had previously been puzzling. but the more precise the influence identified, the sounder the possible conclusion.

To close this argument, when suggesting putative influences, whether specific or general, there is a positive aspect of establishing what is to be compared and weighing the similarities. There is also a negative aspect of negating the possibility of independent development or borrowings from a different source. This second phase is that of adducing evidence that

⁸ There are questions as to the date of this document and whether the saying is original in *Onchšəsongy*, or whether it is, in fact, simply its first known attestation. For a bibliography see Weeks 1994, pp. 172–3.

⁹ Although van der Toorn notes this parallel, the further discussion favours seeing a stronger Hellenistic influence upon *Qohelet*. See van der Toorn 2000, pp. 36–7.

borrowing is the best hypothesis to account for the similarity. In respect of supposed general influence it is, I think, important that the theory explain a feature in the receptive culture that was otherwise dark or puzzling.

By these canons, Hengel's efforts to establish a Hellenistic background, ultimately fail. He notes, fairly, that the search for Greek parallels to *Qohelet* has been fruitless, and rejects direct Greek influence. However, because of the language and the 'whole milieu' of *Qohelet*, he opts for an origin between 270 and 220 BCE, arguing that it betrays the *spirit* of Hellenism. Hengel explicates what he means by reference to a wide variety of Greek philosophy, art, comedy and epitaphs.¹⁰ Yet he also states that some of the terms Qohelet uses to express his key concepts may have come from the Hebrew or Aramaic usage of his age, 'about which on the whole we know very little'.¹¹ Further, although Hengel mentions *Gilgamesh* and some Egyptian parallels, he does not pursue the Western Asian sources. When he writes of the 'milieu' of *Qohelet*, e.g. a period of peace, strict administration, oppression of the poor, and the power of the king, he declares that these best suit the Ptolemaic period.¹² However, he does not consider any other periods, and does not adduce evidence to establish his characterization of the period.

Hengel concedes that he is unable to establish a clear influence from the philosophers of Greece, so, focussing upon the concepts of fate which circulated in the Hellenistic world, he asserts that Qohelet must have picked up his ideas on fate from 'Ptolemaic officials, merchants and soldiers, who were not lacking even in Jerusalem. *In this way Koheleth encountered not the school opinions of the philosophers, but the popular views of the Greek "bourgeoisie"*'.¹³ This is, with respect, a trick of the eye. Hengel has no information at all about what 'Ptolemaic officials, merchants and soldiers' were teaching in Jerusalem. To preserve the theory of Greek influence, in circumstances where it cannot be demonstrated, it is said that the influence must have come in a form other than that known to us. Further, Hengel completely ignores the very substantial Mesopotamian lineage of the idea that the deities determine the fates — a concept that was an absolute fixture in literate Mesopotamia and polytheist Western Asia generally, from the Sumerian concept of the *ME* to the Akkadian notions of destinies and fates.

This is not to deny the value of Hengel's work, only to argue that his views of the origin, date and meaning of *Qohelet* form a circular, self-supporting complex. Further, his theory does not shed light upon any

¹⁰ Hengel 1974, pp. 115–6 & 122–5.

¹¹ Ibid., p. 119.

¹² Ibid., p. 115.

¹³ Ibid., p. 125 (italics in the original).

puzzling feature of *Qohelet*, and that, on my principles, is quite a serious flaw in such a general argument. A similar sort of difficulty besets de Jong's method. To him, the work protests the ambition of the Hellenistic period, and 'the emphasis on the limitation of man compared to God's infinity was directed against the hybris of the Ptolemaic empire'. Yet, on the very next page he shows how these ideas — god's infinity and the limitations of humanity — can be traced in the Bible.¹⁴ Apart from the fact that he does not seem to have entertained other candidates for the laurel of cruel and proud supra-national tyranny, one may ask, when is it not appropriate for a religious figure to protest the ambition of the age?

These questions, the meaning of *Qohelet*, its date and authorship, need to be separated out and reconsidered afresh.

2. What does *Qohelet* mean to say?

In *Qohelet* the concept of earthly life 'under the sun' (*tḥt h-šmš*)¹⁵ is absolutely central. The book clearly says that this life is limited and shall pass away. Because nothing has lasting significance on this earth, mundane life cannot satisfy the human thirst for something of permanent value. But, equally clearly, *Qohelet* says that there is an exalted aim available in life: seeking God and living by eternal values. It is possible to live under the sun, remembering God.

The first verses of this book have achieved wide currency because of their power of uncompromising shock: all that we can toil at under the sun is vain,¹⁶ there is nothing new under the sun.¹⁷ The sun itself is part of the cycle of futility. *Qohelet* applied his mind to seek out by wisdom (*ḥkmlh*)¹⁸ all that is done under the heaven. Significantly, 1:14 states 'I saw all the deeds that are done under the sun; and see, all is vanity and a chasing after wind.' These references to the sun are hardly accidental, as they occur *three times* in the first 14 verses. The equivalent reference: 'under the heaven

¹⁴ de Jong 1997, pp. 164 & 165.

¹⁵ In the LXX, *hupo ton hēlion*.

¹⁶ The translation of the word *hbl* presents many difficulties. It could be retained as a metaphor and translated as 'vapour' or 'wind'. The LXX translation may be correct. The LXX uses *mataiorē*, 'vanity', 'emptiness'. While our understanding of ancient Hebrew has vastly increased, it seems plausible to suspect that *hbl* had an extended meaning, accurately rendered by *mataiorē*. Scholars translate it according to their sense of what it should mean, as they interpret the text. See, for example, Whybray 1998, pp. 262–4.

¹⁷ All citations are from the NRSV.

¹⁸ In LXX *sophia*.

(skies)', in 1:13, makes a fourth.¹⁹ This phrase reappears in 2:3, while 'under the sun' qualifies the statements in 2:11, 17, 18, 19, 20 and 22. This makes a total of seven such references in the first two chapters: an unmistakable clue that they are pivotal in this work. This spatial and temporal context governs the first two chapters and the entire book: vanity is a property of this passing world.

In this context, to say that wisdom and foolishness have no significance is to say that they lack any *eternal* significance, a reading which is confirmed when Qohelet states that whatever God does endures forever (3:14). The connection argued for here is explicitly made in verse 9:9. 'Enjoy life with the wife whom you love all the days of your vain life, that are given you *under the sun*, because that is your portion in life and in your toil at which you toil *under the sun*.'

The book is premised upon the distinction between these ephemerals which subsist under the sun, and the works of god which endure forever (3:14). Scholars have noted that the phrase 'under the sun' occurs in *Qohelet* 29 times,²⁰ and the parallel phrases 'under heaven (the skies)' and 'upon the earth' three times each. As Barton also observed, no other Biblical writers use the phrase.²¹ In fact, the best parallels for it are from the literature of Western Asia.²² Longman observes that it is attested in Elam from the twelfth century BCE, and in the Canaanite/Phoenician Tabnit and Eshmunazar inscriptions (sixth and fifth centuries BCE, respectively)²³. He also says that it is attested in *Gilgamesh*, but I cannot find it, and Michel's table of other instances of the phrase does not list *Gilgamesh*.²⁴ For the reasons given here, neither do I agree that the phrase *ṯḥt h-šmš* is nothing but a synonym for 'on earth'.²⁵

¹⁹ The Hebrew word is *šmym*. I do not really like the translation 'heaven', which is theologically charged. I use it only because the NRSV does. I prefer to say 'skies'. It makes one realize that this word actually means the skies above our heads. The LXX reads *hupo ton ouranon* and I would make similar comment there, although the situation is not equivalent to the Hebrew.

²⁰ Barton 1908, p. 70, counted 25 times; Longman 1998, p. 66, and Michel 1998, p. 94, correctly count 29.

²¹ Barton 1908, p. 70.

²² Peckham 1968, pp. 79–80 discusses and dismisses the view that it was a 'translation-loan from Greek'.

²³ For the text of these, see Stéphan 1985, pp. 71–4. 'Phoenician' is, of course, a Greek term, which the people in question never used. They referred to themselves as either Canaanites or as the people of a specific town.

²⁴ Longman 1998, p. 66; Michel 1998, p. 99.

²⁵ To cite two examples, see first Wright 1976. He is aware that he is an exponent of the 'New Criticism' and is giving particular regard to 'a careful verbal and structural analysis', p. 249. See also the discussion in Longman 1998, p. 66.

Longman states that:

... Qohelet's frequent use of the phrase *under the sun* highlights the restricted scope of his inquiry. His worldview does not allow him to take a transcendent yet immanent God into consideration in his quest for meaning.²⁶

It seems to me that the situation is, in fact, rather the opposite. The use of the phrase does not mean that the scope of Qohelet's enquiry is limited: rather, the enquiry was focussed, and the distinctions Qohelet drew were kept clear and separate. That god has arranged life here, under the sun, is fundamental. Once this is seen, a new approach to *Qohelet* is possible. I illustrate this by reference to the following themes.

First, the scope of Qohelet's enquiry is the business which God has allocated to humanity (1:13), *i.e.* his undertaking of these very investigations us in accordance with the divine schema. God, he says, has given us a sense of past and future, yet not the means to fathom what we seek to know (3:11). This is the rationale for Qohelet's enigmatic style. It is in our nature, as created, that we wish to know what we cannot. The value of our efforts are not in finding a tidy solution, but in the attempt to understand. This is why wisdom excels folly although the same fate awaits both fool and sage (2:12–14).

The second idea relating life under the sun to the life of divine remembrance is that God distributes wisdom and joy. All the sinner (*huta*) can do is gather and heap (*lamwp wlknwm*) (2:26). It is in the nature of God's order that the labours of the sinner amount to nothing of permanent value.

Third, God has made everyone busy and allocated a suitable time for everything (3:9–11). We should act for the sake of the action and for wisdom, not for some future benefit. Judgment is instant, for any act, if done wisely, is its own profit and joy. Thus evil judges obtain no profit from their injustice, their death is as the death of animals. Even if they have acquired wealth, this is no benefit in Qohelet's book, for it is a gain which accrues under the sun. Conversely, the just take a simple joy in their work (3:16–22). This, I think, is the sense of the word *ysmh* here. The LXX seems clearer on this point, using the verb *euphraino*. As I see it, it refers to an inner state which is actualized in the doing, *i.e.* every labour has a spiritual component. Thus, whatever we are occupied with, whether it is weeping or laughing, tearing or sewing, silence or hate (3:1–8) the important thing to Qohelet is how it is done, the spirit with which it is done, not the immediate results.

²⁶ Longman 1998, p. 66.

This is a departure from standard interpretations of *Qohelet*, but it is a defensible one. First, such views are known elsewhere in spirituality. In the Assyrian *Righteous Sufferer's Prayer to Nabû* it is said 'I have become finished through pain, as if I did not fear your godhead; I weep (because) I did not experience the beauty of my life.'²⁷ The Akkadian is, relevantly, *ina (ZI) napišt-ia la a-mur-ra du-muq-ša*. This is not quite the same as *carpe diem*. It is not so much that the moment flees, perhaps, as that it is eternal and if one is present to it, one receives its grace. Comparative spirituality knows other examples. In Jean-Pierre de Caussade's *Sacrament of the Present Moment*, he wrote

'... these souls... faithfully fulfil their duty to the present moment according to his (*i.e.* God's) wishes. They do not allow themselves to question, turn back, or consider the consequences, the causes or the reasons.'²⁸

And from Fitzgerald's 1859 translation of Omar Khayyam:

Alike for those who for today prepare,
And those that after a tomorrow stare,
A muezzin from the Tower of Darkness cries,
'Fools! Your reward is neither here nor there.'

A rather full statement of this conception in spiritual writing is found in a transcript from Gurdjieff from some unstated time in the 1940s:

... this reminds me of a quotation from a Persian philosopher... It is inscribed on a monument next to a village in Persia. *The present exists to repair the past and prepare the future*. ... The future and the past do not exist without the present. The present exists to repair all our mistakes and to prepare the future, that is to say, another life, desirable for you. It is necessary to have a present. The past is the past... it will never return. Tomorrow can come, but a different tomorrow depends on the presence of today... Forget yesterday and forget tomorrow.²⁹

When Gurdjieff states 'It is necessary to have a present', he is implying that we do not have a present unless we are aware of the present moment, and alert to it. These ideas are at home in a spiritual framework that is oriented inwardly and set to engage with life.³⁰ These comparative pieces do not prove the correctness of my interpretation of *Qohelet*, but they do show that it is feasible. God has allocated to us that we must eat, drink and try

²⁷ Livingstone 1989, p. 30, ll. 13–4.

²⁸ de Caussade 1741, p. 25.

²⁹ Gurdjieff 1996, pp. 280–1.

³⁰ Compare also Nicoll 1952, p. 223: '*Now* is spiritual. It is a state of the spirit, when it is above the stream of time-associations.' Nicoll was strongly influenced by Gurdjieff, with whom he studied for a period, but the ideas in this book are an independent development.

to have pleasure in our labour (2:24–25, 3:12–13). Although the fact that the fruits of that labour may pass to others is evil (e.g. 2:20–21), the important thing is the actual doing, the eternal moment, as it were. This, I think, is the clue to two difficult passages, 3:15 and 9:7. Qohelet's view of time is sophisticated. The value of the action is not in what follows, it is in the action itself. Thus, when in 9:7 he says rejoice in your bread, for God has approved your actions, he again uses the root *smh*, and the LXX has *euphrosunei*. What God delights in (*ryh*) is that humans perform their actions in a spirit of *smh*.³¹ I could continue, interpreting *Qohelet* by reference to the axial idea of life under the sun, but I do not think it necessary. 'Life under the sun' was also for medieval Christian writers the clue to the book.³²

So far as I can tell, the medieval interpretation was based upon the exegesis of St Ambrose of Milan. In *De Fuga Saeculi* he wrote:

'Omnia Vanitas' inquit Ecclesiastes, 'quae in hoc saeculo sunt'. Denique qui salus esse vult, supra mundum ascendat, quaerat Verbum apud Deum, fugiat hunc mundum, terras relinquat.³³

('All things are vanity' said Ecclesiastes, 'which are in this world'. So let whoever would be saved ascend above the world, seek the word which is with god, flee this world, leave the earth.)

This is followed and, to an extent, developed. Thus, Guerric of St Quentin, teaching in the Dominican chair at Paris between *circa* 1233 and 1242,³⁴ and referring to the teaching of Hugh of St Cher (who taught from 1230 to 1235), writes:

Guerric on Eccles. 1:3, *Quid habet amplius homo...?*
quo laborat sub sole, labor pro caducis. De hoc dicit hic: *quo laborat*. Est enim labor supra solem pro eternis. Mt. 6 Querite primum regnum Dei. Propter hoc dicitur mulier sole amicta, Apoc. 12.³⁵

(*What further does a man have...?*
that for which he labours under the sun is a labour in vain. Concerning it he says this: *for what does he labour?* However, there is a labour which is above the sun and for eternity. Matthew 6: *Seek first the kingdom of God*. For this reason it is said that the woman is clothed with the sun, Apocalypse 12.)

³¹ Further, the pleasures in question here are rather simple ones: food and wine. It is not as if the writer is offering readers divine authority for plunder and rapine.

³² I had already formed my view before I learnt of their writings.

³³ Ambrose, at 418.

³⁴ On this chair, see Gordon Leff 1958, pp. 206–7.

³⁵ In Murphy (ed.) 1986, reprinting an untitled essay originally published in *Dominican Studies* 2 (1949), pp. 318–55. I cite here p. 22. Guerric used Hugh's work, but was not his pupil. The references to the careers of Guerric and Hugh and their relationship are at pp. 21 & 40.

Hugh of St Cher writes:

Moraliter... *sub sole*... *i.e. circa* terram, *i.e. pro* terra... Et ideo vanitas est omnis huius (modi) labor quo... ambiuntur honores caduci... Boni supra solem laborant, scil. pro eternis...³⁶

(The moral meaning of *under the sun* is 'terrestrial', that is, for earth. And that is why all this type of labour is vanity, for its rewards comprise ephemerals. The good work for what is above the sun, meaning for eternity...)

Elsewhere, Smalley cites Hugh and Guerric in more detail, but to the same effect, and quotes similar passages from William of Auxerre (1180–1249), St Bonaventure (1221–74), and less important scholars.³⁷ These writers looked to relate their Old and New Testaments, and so vindicate their religion. A tradition from Origen, Ambrose and Jerome had it that the books of *Proverbs*, *Qohelet* and the *Song of Songs*, had been written by Solomon himself to guide each of three stages of the spiritual life. For beginners, *Proverbs* would teach how to live in the world; for serious students making progress, *Qohelet* taught them to value eternity and to devalue the perishable world; and, finally, for the adept, *Song of Songs* was a mystical canticle of the love of God. This schema seems to have been adopted as a basis for teaching in some of the medieval schools, notably the Cistercian.³⁸

Some early rabbis based their interpretation of *Qohelet* on the idea that the Torah was created before the sun. The school of Rabbi Jannai said that one has the profit of one's labours 'before the sun'; another spoke of profit above the sun. In another vein, a *midrash* speaks of the profit accruing from labours not for one's own benefit. In these ways, they argued that Qohelet's notions of the vanity of labour under the sun did not render useless the study of the Torah.³⁹ As much as the medieval scholars, the rabbis were driven by the logic of their religious position to harmonize *Qohelet* with their general teaching. This is not reason to dismiss their ideas, but only to weigh them cautiously. Some of these older ideas are stimulating, even if one ultimately disagrees with them. Dell showed that former interpretations can be used to 'illuminate current debates'.⁴⁰ Another benefit of considering the views of schoolmen and ancient rabbis is that today we can make as much, if not more, use of comparative spirituality as we have made of anthropology.

³⁶ Cited in Murphy (ed.) 1986, p. 22. Hugh then goes on to refer to Mt 6:33 and Apoc. 12:1.

³⁷ Murphy (ed.) 1986, pp. 110–5. These pages are from the untitled essay which originally appeared in *Dominican Studies* 3 (1950), pp. 236–74.

³⁸ Murphy (ed.) 1986, essay one pp. 39–42; essay three, p. 110.

³⁹ Dell 1994, pp. 313–8.

⁴⁰ *Ibid.*, p. 301.

Wisdom is unattainable without pleasing God (*tôb l'pnu*). There is a naturalness about wisdom, it comes to those in a right relationship with God, and not to the sinner (*hôte*). Any other type of life is futile (2:24–26). In this life under the sun it is our lot (*hlq*) to enjoy our work — a simple enjoyment which is of God (3:22, 5:12 and 2:24). I connect this with the ideas that ‘God made human beings straightforward, but they have devised many schemes’ (7:29) and that there is a time for everything (3:1–8, 3:17 and 8:6). ‘He has made everything suitable for its time...’ (3:11). The sleep of labourers is sweet, and that of the surfeited is not (5:10–12). That is, God created a natural order, which humanity ignores or defies. In God’s order, events unfold according to time and fate, and there is a rightness about this. The person who follows that natural order and does all things in their time, finds wisdom.⁴¹ Righteousness and wisdom seem to be the natural lot of humanity, but we reject our lot and hence do not mature to wisdom. To find wisdom, seek it out by living by the divinely ordained order, and preferably start while young and strong (2:26, 11:8–9). A person does not become wise by decree, as it were (7:23).

One writer, who believes that ‘the orientation [of *Qohelet*] is pessimistic-skeptical’, thinks it a shortcoming that *Qohelet* does not say how one will know what the right time is.⁴² I suspect that there is a failure of sympathy here in the sense that *Qohelet* is being asked to answer questions that are outside the scope of his enquiry. He teaches principles and if one grasps them, one can discern how to act in any given situation. For this reason, to possess wisdom is to have eyes in one’s head (2:14). Would one expect *Qohelet* to produce a chronological list of times? *Qohelet* seeks the underpinning principles on which our life and aims can be soundly based.⁴³ To *Qohelet*, it is central that wisdom is better than folly: this is repeated time and time again (2:13–14, 4:13, 7:11–12, 7:19, 8:1, 9:16–18, 10:10 and 12; to like effect 2:26).

No entirely satisfactory *definition* of wisdom is known to me. Such a definition would first acknowledge that wisdom is a modern construct applied to certain ideas abstracted from their context. Second, it would enable a

⁴¹ See 8:5—confidence that the king will not harm a person who obeys (*šwmr*) his command. Although he asserts it, Whybray does not in fact show that *Qohelet* is criticising this view. Whybray 1989, pp. 132–3. Crenshaw argues that *Qohelet* teaches that one cannot know the time and way (8:5) because the evil we do prevents us using our mind properly (8:6b–7). Crenshaw 1988, pp. 151–2. However, the wise can understand time and way. The wicked cannot. This supports my interpretation that to follow God’s law is to acquire wisdom naturally, and to act wickedly is to acquire folly naturally.

⁴² Williams 1971, pp. 179–81.

⁴³ I disagree with Williams at many points. But if my interpretation is correct, my reasons are plain and no debate is necessary.

reader to distinguish what wisdom is from what it is not. Rather than define it, scholars attempt to describe the operation of wisdom in the Bible.⁴⁴ Von Rad's *Wisdom in Israel* assumes the feasibility of the wisdom construct.⁴⁵

Yet even he states:

... it could even be that scholarship has gone too far in an uncritical use of this collective term; it could even be that by the use of this blanket term it is suggesting the existence of something which never existed and that it is in this way dangerously prejudicing the interpretation of varied material.⁴⁶

A good deal of research has been conducted on the sense of the word *hkmh* in the Bible and its individual books. For example, Fox surveys *Qohelet*, and finds that there are three fundamental aspects to wisdom: ingenuity, good sense and intellect.⁴⁷ In my opinion this is too limited and omits the most basic element — piety. That is, *hkmh* is not simply an intellectual potential; it includes a moral and spiritual disposition.⁴⁸

3. An oral origin for *Qohelet*?

At the close of Whybray's survey of the question of 'schools', he states:

The evidence for the existence of schools with professional teachers in Israel, at any rate until late times, is then not conclusive. It remains no more than a possibility, upon which it would be hazardous to construct further hypotheses. The present uncertainty on the question is reflected in the wide differences of scholarly opinion concerning the character, number and variety of these supposed schools.⁴⁹

In my opinion, this book was composed by an author who wished to record an oral teaching. The ideas and phrases in this book are those of *Qohelet*, but the book was written by someone else. Then, possibly, a pious postscript at 12:13–14 was added at a time when the purpose of the book was no longer understood, but it had acquired authority and it could not be ignored or rejected. The very title, together with 1:1, indicate that the

⁴⁴ Whybray 1974, pp. 1–5.

⁴⁵ Von Rad 1972, Note Von Rad says that he will attempt to 'understand somewhat more exactly what we are accustomed to include under the general term "Wisdom in Israel"' (p. 5). While acknowledging that the content and validity of the term have not been definitively established (p. 7), he assumes the validity of the term throughout his book.

⁴⁶ Von Rad 1972, p. 7.

⁴⁷ Fox 1993, pp. 117–20.

⁴⁸ *Ibid.*, p. 116.

⁴⁹ Whybray 1974, pp. 33–43.

originator of the ideas was a speaker.⁵⁰ It is as if a modern work was titled 'The Speaker' and opened with 'this is what the speaker had to say'. That it then moves into first person is only to be expected: the speaker would do so, and his words are being repeated. It then moves from first person to third person and back, much as Boswell's *Life of Johnson* does, and for exactly the same reason. This also explains why the book seems to meander and is difficult to grasp as a whole. It was not composed to present an integrated train of thought.

One cannot be certain, but it appears possible, if not likely, that there was one author of 12:9–12. That person probably wrote 1:1 and knew the original Qohelet, for he speaks of other things done by Qohelet. He aptly describes the preceding chapters as 'goads' and 'nails', for they are provocative statements which together have a powerful effect, even if like nails and goads they are used severally, although in combination.

When one approaches this work as a spiritual text, which is how many readers have seen it, one no longer needs to criticize its failure to meet theological standards. Even less does one need to read it in the light of post-modernism. One writer sees a younger and older Qohelet, split from one another. The younger Qohelet, he says, 'is remarkably like the postmodern self', needing no goal except meeting its own desires.⁵¹ But an interpretation which makes sense of the whole of the work, without doing it violence, is to be preferred to one which splits and strains the text. How does it assist an understanding of *Qohelet* to say that '... the deconstructed notion of self heralds the death of the author and of the subject. The self is dead because we cannot find it.'⁵² *Qohelet* is not written as modern works are. It does not elaborate premises, define terms, state a method of proceeding, and then argue to a consequent conclusion. It is a teaching document, almost hieratic in tone. Although there is a certain polemic in it, the tone is not argumentative, but magisterial.⁵³ The speaker entertains no doubt about the correctness of his views; he has conducted experiments with his life. For example, chapter 2 opens with his decision to prove the value of pleasure, and goes on to present conclusions drawn from extensive trial and error. The tone is didactic, in the best sense of that word, because it is simultaneously intensely engaging and instructive. The speaker, in words charged with feeling, declares that at one time he came to hate life and to feel

⁵⁰ On the meaning of the noun *qohelet* see Whybray 1989, pp. 2–3; Crenshaw 1988, pp. 32–4.

⁵¹ Christianson 1998, p. 432.

⁵² *Ibid.*, p. 429.

⁵³ Dell 1994, considers it to be 'instructional', pp. 309–10.

despair (e.g. 2:17 and 2:20), and yet the sense of the work as a whole offers a sober but real hope: it strips away illusions.

This is how the medievals saw it. It weans one from false confidences and futile goals. It teaches that earthly life — *life under the sun* — is vanity unless and until it is oriented towards the divine dimension. For want of a better phrase, one could term this a life lived with ‘divine remembrance’. Those words, drawn from 12:1, are less inadequate than others. One could say that Qohelet exhorts us to ‘live two lives simultaneously’.⁵⁴

4. The context of *Qohelet*

The sense of *Qohelet* emerges only when it is read against its larger background. It is especially instructive to contrast it with the Sumerian and Akkadian wisdom material surviving from Ugarit and Emar,⁵⁵ the two epics of *Gilgamesh*, and the Egyptian *Song from the Tomb of King Intef*.⁵⁶ Further, the content of the book is consonant with many Biblical ideas exemplified in Isaiah 40:8 among other places. This suggests that *Qohelet* may not be so isolated within the Judaic tradition as supposed. For, if the things of the earth are ephemeral, as Isaiah says,⁵⁷ but the word of our God (*db̄r elhynw*) endures, then it would follow that permanent values find their ground in the divine realm. Transcendent values are the criterion by which to judge what occurs under the sun, in the worldly sphere. One can see how such a view is closely connected to much in the Bible.

The striking difference between *Qohelet* on the one hand, and the balance of the Biblical material on the other (subject only to the exceptions of *Proverbs* and *Job*) is the absence of Israel. Apart from the references to the son of David, King in Jerusalem, one could read *Qohelet* in translation without ever thinking of the historical (or legendary) aspects considered central to Israelite religion, such as the Exodus. It could just as well have come from Emar. *Qohelet* represents a glimpse into what must have been a spiritual and almost mystic side of Israelite religion, a side in which the relation between the divine being and Israel was not so fundamental as the individual’s relationship with the divine, an aspect later generations have

⁵⁴ A phrase used by the late George Adie.

⁵⁵ For the Emar material, see Gianto 1998. For Ugarit, see Nougayrol 1968.

⁵⁶ For a general overview of this material see the appendix in Weeks 1994. This detailed appendix titled ‘The Non-Israelite Sources’ gives all relevant materials, except *Intef* and *Gilgamesh*, and references to the texts and scholarly comments. *Gilgamesh*, in both the Old Babylonian and Standard Babylonian versions, can be found in Dalley 1989, pp. 136–53 & pp. 39–135 respectively. *Intef* is in Lichtheim 1975, pp. 194–7.

⁵⁷ Perhaps Deutero-Isaiah, but the point is that there is any parallel at all.

found difficult to comprehend.⁵⁸ Of course, these two sides can always co-exist within one religion.

I do not propose here to look in detail at the similarities between *Qohelet* and Western Asian literature referred to above; that has been done elsewhere. However, one might reiterate that much of the interpretation of *Qohelet* that finds Greek influence is based upon a limited comparison. For example, Fox refers in a general way to Western Asian parallels without ever dealing with two major contributions by Jones and de Savignac, which consider the *Gilgamesh* epic.⁵⁹ This is particularly important because one passage of *Qohelet* is so close to *Gilgamesh* as to be almost certainly a free quotation. Similarities were noted as long ago as 1905. Jastrow saw that the parallels were such that dependence was the likeliest explanation.⁶⁰

This line of enquiry was hampered by a lack of accessible material from Western Asia and by the understandable tendency to look for influences from those areas which scholars understood best, *i.e.* the Hellenistic world. Less methodologically understandable, the 'influence' was assumed to be exhaustive. In his latest work, Fox deals with the history of the 'discovery' of Hellenistic influence in *Qohelet*,⁶¹ but his treatment of Western Asian analogies is by no means complete. In particular, it lacks a reference to Jones (1990). Therefore, I shall briefly set out a selective chronology of some of the recent and more accessible contributions in this area.

In 1966, Dahood attempted to place *Qohelet* in a Western Asian setting. In particular, he argued that the language and context pointed to a close familiarity with Hellenistic Phoenicia, and that certain usages were reminiscent of Ugaritic.⁶² This approach has not proved convincing and I could not discern any clear line of argument in the article.

In 1978 de Savignac offered some correspondences between *Gilgamesh* and *Qohelet*. These included, in particular, a 'pathetic notion of humanity' in the coming and going of man, the ineluctability of death, and the belief that the best one can hope for is the enjoyment of the pleasures of life, family and friendship. He argued that there is a striking congruence between the lesson of tablet XII, and the conclusion of *Qohelet*. That is, although we have grounds for despair, one should have children and accept a glorious death for it will be better in the afterlife. De Savignac says that *Qohelet* was open to Greek science, the 'exquisite' Egyptian civilisation, and the

⁵⁸ Hengel 1974, refers to *Qohelet* as 'denationalizing' the concept of God, p. 117.

⁵⁹ Fox 1999, pp. 11–4.

⁶⁰ Jones 1990, p. 349, citing Jastrow.

⁶¹ Fox 1999, pp. 6–8.

⁶² Dahood 1966. See, for example, p. 275 for a linguistic parallel with Ugaritic.

‘poignant’ Babylonian.⁶³ In particular, he pointed to the Old Babylonian text:

Gilgamesh, where do you roam?
 You will not find the eternal life you seek.
 When the gods created mankind
 They appointed death for mankind,
 Kept eternal life in their own hands.
 So, Gilgamesh, let your stomach be full,
 Day and night enjoy yourself in every way,
 Every day arrange for pleasures.
 Day and night dance and play,
 Wear fresh clothes.
 Keep your head washed, bathe in water,
 Appreciate the child who holds your hand.
 Let your wife enjoy herself in your lap.
 This is the work... (broken off)⁶⁴

The similarity to *Qohelet* 9:7–9 is precise,⁶⁵ but de Savignac was trying to show that *Qohelet* was a cosmopolitan work, and assumed Greek influence, just as Dahood really did. In 1979, Whitley argued that *Qohelet* was a native of Jerusalem, but knew of Ugaritic ‘cultural remains’ and used Ugaritic to make sense of certain problem words in the text.⁶⁶ I suspect that the influence of Ugarit was mediated to Israel through Phoenicia. Interestingly, Whitley was prepared to see parallels between *Qohelet* and the Greek writer Theognis, reviving a notion which had been championed by Ranston in 1925.⁶⁷ I find it difficult to see how the spirituality of *Qohelet* can have been influenced by the pious thoughts and saws of Theognis, who reminds me of Shakespeare’s Polonius.

In 1980, Lambert reviewed the *Theology of Death*, and presented more of the meditation on death from *Gilgamesh*, this time from Tablet X of the Standard Babylonian.⁶⁸ This was picked up in Jones (1990), who pointed out that a literary relationship between *Gilgamesh* and *Qohelet* was possible, as fragments of *Gilgamesh* had been found at Megiddo. However, even here Jones assumed a late date for *Qohelet*,⁶⁹ a view which I show below is no longer necessary. In comparing the two works, he concludes:

⁶³ de Savignac 1978, *passim*

⁶⁴ Dalley 1989, p. 150.

⁶⁵ de Savignac 1978, p. 320; p. 153, n. 26; Dalley 1989.

⁶⁶ Whitley 1979, p. 824.

⁶⁷ Ranston 1925, esp. 13–62.

⁶⁸ Lambert 1980.

⁶⁹ Jones 1990, p. 350.

Both... complain about human mortality and seek to find meaning in life in spite of death. Both are written in the name of a dead ruler who experiments with hedonism, only to find them unsatisfying. Each work complains of frustration with toil, though for slightly different reasons. ... Both texts have a mood of despair because death is inescapable, and both come to terms with that despair by accepting the inevitability of death. ... However, Gilgamesh's solution to mortality, to be satisfied with the buildings and accomplishments one leaves behind, is rejected by Qoheleth as another futility (2:4–6, 11). Nevertheless both works refer to a *carpe diem* solution as one possible response to mortality. Accept death, and, in the meantime, make the most of what life you have.⁷⁰

While I read both works somewhat differently, I have quoted this because it shows how, even in a traditional reading of the texts, Hellenistic influence does not need to be assumed.⁷¹ How then, did the view arise that *Qoheleth* was written under the influence of Hellenistic thought? It seems to have been because of the seemingly rationalist and humanist approach in *Qoheleth*, the emphasis upon humans making experiments and learning by trial and error.

There are two flaws here. First, the factual. Hellenistic influence does not need to be assumed to posit such a view. As Jones points out, neither *Qoheleth* nor *Gilgamesh* appeal to 'the usual religious solutions' and they share a common omission. 'Even though their heroes were associated with temple building, nothing is said about solace from worship in temples.'⁷² An individual approach, without the mediation of established rites and religion is therefore common to both. Further, evidence of the spirit of personal enquiry in ancient Western Asia was overlooked. For example, in the *Babylonian Theodicy*, the 'sufferer' replies to his wise 'friend':

i-na ad-na-a-ti ab-re-e-ma šit-na-a i-da-a-tu

(I have seen the world, the signs are different.)

Perhaps the sense is better captured in Lambert's translation 'I have looked around society, but the evidence is contrary.'⁷³ In the famous *Ludul Bēl Nēmeqi*, the writer time and again speaks from his personal experience and reports how his deity failed to answer him. He describes how he looked about him, saw various situations, how he understood what he saw, and

⁷⁰ Jones 1990, p. 363. Noel Weeks has pointed out to me that there may well be a polemic in *Qoheleth* against those who think that by building and setting up their name they escape the futility of purely mundane existence.

⁷¹ Day 1995, pp. 59–60 notes that the influence of *Gilgamesh* upon *Qoheleth* is 'very difficult to deny'.

⁷² Jones 1990, pp. 363–4.

⁷³ Lambert 1960, pp. 84–5, XXIII 243.

how he responded.⁷⁴ The author of the *Gilgamesh* tales, going back to the Sumerian story we call *Gilgamesh and the Land of the Living* could conceive how a shocking sight would start an individual upon a personal quest. One can find the same personal approach in any number of hymns, although to interpret the material and to explicate it requires a little effort. The point is that individuality existed and was expressed in ancient Western Asia, but it was not expressed in the way that it was in ancient Greece. Differences of style should not blind us to substantive similarities.

The second flaw is in methodology. Hellenistic priority has been assumed. If something new did appear under the sun, why assume that it appeared in Greece? Why could it not have appeared in Western Asia and spread to Greece as so much did?⁷⁵ In 1995, Lambert published an important article,⁷⁶ to be mentioned in conjunction with one in 1998 by Gianto. With this material, we now have clear parallels between *Qohelet* and texts attested from Ugarit and Emar, which are traceable back to Sumerian and Akkadian prototypes. It is crucial to know that such ideas could find a home in north-west Asia in the second millennium. To deal first with Emar, these texts are dated from the late 14th to early 12th centuries BC.⁷⁷ Emar, a city of chiefly north-west Semitic stock, was probably destroyed by the Sea Peoples in *circa* 1187 BCE. The texts in question were found in the library of a temple known as MI.⁷⁸

The first text, Emar VI.4.767 provides parallels to Qohelet's teaching that destiny, the way things are, is fixed by God. I do not accept that there is a parallel to *Qohelet* 1:9 as Gianto suggests. That text does not, I think, deal with the immutability of destiny, but with the fact that humans do not create anything new; they only arrange what god has created. The Emar text goes on to talk about the futility of the works of the great kings:

The life of mankind does not [last] forever.
Where is Alulu, the king who reigned for 36,000 years?
Where is Entena, the king who ascended to heaven?
Where is Gilgamesh, who sought life like Ziusudra?
Where is Huwawa who [x x x]?
Where is Enkidu [x x x] in the land?

⁷⁴ This hymn is in Lambert 1960, pp. 21–62. The attitude I refer to is nicely encapsulated in the parts set out at pp. 38–9.

⁷⁵ Contemporary scholars are uncovering the influence of Western Asian culture and ideas upon Greece. For but three accessible examples, see Burkert 1992, Penglase 1994 and West 1997.

⁷⁶ Lambert 1995.

⁷⁷ Gianto 1998, p. 473, n. 1.

⁷⁸ Beckman 1996, pp. 5–9.

... Where are the great kings from days of yore to the present?
 Have they not been conceived? Have they not been born?
 How is life without joy superior to death?
 Man I will truly... let you know your god.⁷⁹

The last line quoted is important. As in *The Babylonian Theodicy* and *Ludlul Bēl Nēmeqi* this type of searching is not seen as incompatible with religious duties and worship. The Ugaritic version refers twice to Ea's fixing of the destinies.⁸⁰ Both the Emar and Ugarit versions are calculated to shock. They demonstrate a sophistication and lack of respect for hoary tradition in second millennium Western Asia. Gianto thinks that this type of iconoclasm was possible only on the periphery of Mesopotamia, and cites *Qohelet* as another example. But I do not think this is so. The material he cites was clearly created in Mesopotamia; whether the original was the Akkadian or the Sumerian is a moot point.⁸¹

Emar text VI.4.778 is a dialogue between father and son. It opens with maxims of common wisdom, but the son questions this and poignantly responds to the father that our lives are passing, like those of animals, and that death makes our efforts futile.

[Many] are those who eat food during the day. Many are those who become pale because of thirst. [Ma]ny of us can see the sun. Many [of us will so]journ in vast darkness. [In the under]world people will lie down. [Eresh]kigal is our mother, we are her sons! Shutters [have been put] at the entrance to the underworld [so that the l]iving cannot see the dead.⁸²

The context of *Qohelet*, then, can comfortably be found in Western Asia and in a period that stretches from the second millennium onwards. What then can we say of its origins?

5. Authorship and date

It has recently and forcefully been argued that there is no good reason to date *Qohelet* to the post-exilic period. In 1993, Young examined the traditional dating and its bases, arguing that the customary reasons for a late date are not compelling. Rather, *Qohelet* is set in the context of the pre-exilic

⁷⁹ I use Lambert's translation, 1995, pp. 39–40. There is also a translation in Gianto 1998, p. 475. Note the similarity to Omar Khayyam.

⁸⁰ Nougayrol 1968, p. 295.

⁸¹ Lambert 1995, p. 38

⁸² Gianto 1998, p. 478.

kingship and assumes that it prevails.⁸³ Linguistically, *Qohelet* is unique and so linguistics alone is not a sound guide for dating.⁸⁴ Isaksson's view is rather different, but in his analysis of *Qohelet's* language, still he points out that not all the matters that are sometimes seen as evidence of lateness must necessarily be read so. For example, he states that traces of Mishnaic Hebrew usage can still be consistent with an origin in the Biblical period, and that the verbal forms and conjunctions may owe more to the character of the text than to lateness.⁸⁵

One of Young's most important suggestions is that 'the original substance of the book of *Qohelet* was oral lectures given by Qohelet in the context either of an established Wisdom school or in the education of a select number of junior officials on a personal basis.' It is not my aim here to pursue this topic in any depth, and the reader is referred to Young for further detail. This study shall assume that Young's arguments are not necessarily correct, but simply plausible, and interpret the text as it stands. However, one must add that although modern scholars are aware of Young's thesis, and sometimes cite his book in their bibliographies, I have not yet seen any discussion of the issues it raises for *Qohelet* studies.⁸⁶

The issue arises why Qohelet does not use the name Solomon as such, but probably intended us to understand that Solomon was Qohelet. Was it to lend authority to the work, or for other literary reasons without stressing the fiction of Solomonic authorship too closely?⁸⁷ Whybray writes that '... the implicit claim to be Solomon... is made only indirectly, hinting at the identification but never actually naming Solomon... (which) may suggest that Qohelet never intended his readers to take it seriously.'⁸⁸

But the simplest explanation is surely that he did intend them to take it seriously, and to be puzzled by it. As noted above, *Qohelet* teaches that the effort to understand is important. He invites the reader to take him to be Solomon, although he does not say so outright. That is, he wishes to make us ask who is the author? And, then, does it matter? Is the reader accepting a statement as true simply because it was said by Solomon? If my reading is correct, Qohelet uses pseudonymity as an educational ploy to undercut pseudonymity as a means of giving a work spurious authority in the minds

⁸³ Young 1993, pp. 140–8.

⁸⁴ Young 1993, pp. 148–54. Young also considers the question of Persian words and finds the evidence on this point unconvincing.

⁸⁵ Isaksson 1987, pp. 36; 55–6.

⁸⁶ For example, Fox 1999 includes his book in the bibliography, but not the text.

⁸⁷ See Crenshaw 1988, pp. 55–7; Whybray 1989, pp. 3–4.

⁸⁸ Whybray 1989, p. 4.

of its readers. *Qohelet* is a teaching document, designed to cause its readers to wonder and to test views, opinions and received articles of faith.

Obviously, Solomon did not write it. First, 1 Kings would probably refer to this work, just as it refers to proverbs and songs at 1 Kgs 4:32. Second, as has been noted time and time again, the fiction of Solomonic authorship is dropped in the course of the book itself. Third, certain passages are written in a way that would be unthinkable for the king himself.⁸⁹ There is no need to labour this.

Reformation scholars argued that the ideas were Solomon's, although it was not written by him word for word.⁹⁰ This too is a contrivance. Some of it is first person, some of it is third person. But it has all been collated in order to preserve and pass on the impact which *Qohelet* made. Poems have been sewn together with prose, and there may be a loose sort of development in the material, but the development is labyrinthine. Now, labyrinths and mazes have their own structure, designed to take the wanderer closer to the goal, then further away, closer and so on. The wanderer, however, has to make an effort. The maze aims to confuse and to provide guidance simultaneously. It seems to me that this is what *Qohelet* is: a literary labyrinth.

And yet we are not finished with Solomon completely. I am not sure that *Qohelet* has no connection with him at all. What do we know of Solomon? Almost all of our material comes from the Bible. The king of Israel's splendour, who speaks to the Lord, and whose name is based upon the root for 'peace', is invested with many mythical qualities. But I wish to suggest that although the Biblical account is overdrawn⁹¹ and we have no lens which will reduce it to a proper perspective, we do have another relevant source: Josephus' work *Against Apion*.⁹² Josephus cited two writers: Dion, described by Josephus as *pepisteumenon* (reliable) in matters of Phoenician history;⁹³ and Menander of Ephesus. Katzenstein considers the secondary material, and his assessment is that Josephus is genuinely citing Hellenistic histories made from the Tyrian records. A telling point is that they refer to Solomon as *turannos* and *basileus* of Jerusalem, and he concludes:

⁸⁹ See the discussion in Longman 1988, pp. 2–9.

⁹⁰ Dell 1994, p. 324.

⁹¹ This seems to be an inescapable conclusion. For one thoroughly sceptical study, see Knauf 1991, *passim*. I am not nearly so sceptical as Knauf, who does not, I note, consider the evidence of Josephus.

⁹² Its true title appears to be *Peri Archaiotētos Ioudaiōn* (On the Antiquity of the Jews).

⁹³ This is no guarantee that he is reliable—Josephus is not going to describe his source as unreliable, at least not in this context.

‘This appellation is clear proof of the Tyrian source of these passages, for the kings of the Phoenician coast, who ruled principally over one city, looked upon Solomon as a monarch of a city, like themselves; nor did Josephus correct this ‘flaw’, even in an account where he endeavours to exalt the greatness of Solomon.’⁹⁴

Dion’s account is that Hiram of Tyre and Solomon had a competition in guessing each other’s riddles, and that Solomon had the better of it until one of Hiram’s subjects, Abdemoun,⁹⁵ solved Solomon’s riddles, and set him such knotty ones that Solomon lost to Hiram more than he had ever won from him. Menander is shorter in this respect, but consistent.⁹⁶ I cannot see why Josephus would cite this if he did not believe it to be accurate. His work was apologetic: to prove the ancient and honourable lineage of the Jews in the face of Greek belief in their own superiority. Immediately prior to the Abdemoun episode, he had been speaking of Solomon’s reign, and stated that Solomon had proved to be cleverer than Hiram in solving riddles.⁹⁷ The references to Abdemoun are entirely unnecessary and, indeed, qualify Josephus’ own praise for Solomon’s wit. That they actually undercut Josephus’ argument suggests to me that he felt bound to include the material lest he be accused of quoting only what supported his polemic, and ignoring unpalatable facts. This suggests a historical basis for the Biblical legends of Solomon’s cleverness. Lemaire concluded from his study of the Biblical material that the account of Solomon’s reign ‘with its focus on wisdom’ was originally indebted to one of his courtiers.⁹⁸ I would not go so far, but I think it should give pause to extreme scepticism.

Some writers have expressed doubts about the reliability of these reports but have not, so far as I can tell, engaged with the material as Katzenstein has. Miller suggests that Josephus’ account of Phoenician records used seems vague and sounds like a folk legend.⁹⁹ Handy opines that it is doubtful that Josephus or anyone writing Hellenistic history saw letters between Solomon and Hiram, or Tyrian records. He states that the papyrus or parchment documents could not have survived, and adds that if they had been copied they could have been full of errors. He asks whether they could

⁹⁴ Katzenstein 1997, pp. 79–80.

⁹⁵ Possibly ‘*abd haman*, the servant of (the god) Baal Hamon, Katzenstein 1997, p. 98 n. 115.

⁹⁶ Josephus, *Against Apion*, I, 112–20.

⁹⁷ *Ibid.*, 108–11.

⁹⁸ Lemaire 1995, *passim*.

⁹⁹ Miller 1997, p. 1. Miller also provides a historical evaluation of the accounts in 1 Kings and 2 Chronicles, to which Millard replies. Miller then responds to Millard’s article, which is less sceptical of the account in the Hebrew Bible than Miller’s. This debate comprises pp. 1–56 in Handy 1997a.

have read the script, queries why Tyre would have kept such records for a millennium and concludes that the 'records' must be Hellenistic curiosities.¹⁰⁰ In the same volume, Millard writes of the data in Josephus that their age and reliability are unknown, and cites an article by Bunnens.¹⁰¹ However, there is nothing in that article to support such a conclusion. Rather, Bunnens says: '*Ce n'est pas ici le lieu de discuter de la nature de ces documents.*'¹⁰²

Note that all of the above arguments by Millard and Handy are *a priori*. I see nothing vague in the relevant accounts, and that they sound like folk legends is irrelevant, as well as subjective. If documents had been copied, they may have been full of errors, but equally they may not have been. What is the speculation based upon? In respect of the scripts, what is Handy's argument based upon? A survey of the development of the Tyrian script as used on inscriptions from the eighth to the second centuries BCE shows no puzzling changes. Rather, we see the opposite. Peckham describes the scripts of Tyre and Sidon as being 'rather conservative in their development', and an examination of his plates shows a tremendous consistency in the forms of the letters.¹⁰³ There is a two hundred-year period between Hiram and the earliest samples, and of course the records in question would have been upon papyrus. No evidence is adduced to show that there would have been any difficulty in reading them. Then why would the Tyrians keep the records? One might ask, why not? But in fact there is reason to believe that at least one reason the Assyrians produced the Assyrian King List was to preserve records that had been crumbling.¹⁰⁴

If it is sound to suggest that there is a Western Asian background for the concepts and spirituality of *Qohelet*, and if Young's arguments are also sound, how can we satisfactorily date *Qohelet*? The possible range now commences any time after the death of Solomon.

There is one other item in the book itself that is relevant to the question of dating: the polemic concerning the afterlife and the survival of animals. *Qohelet* refers, sceptically, to survival after death for humans and also for animals (3:19–21). It is not that he denies it but, in his rhetorical way, he calls into question what we can really say we know of these ideas. *Qohelet* does believe in an after-life, but it is a shadowy existence in Sheol (9:5–6 and 10). This makes sense of the value he attaches to burial (6:3). In chapter

¹⁰⁰ Handy 1997b, p. 97, n. 5; p. 98, n. 7.

¹⁰¹ Millard 1997 p. 47 & n. 48.

¹⁰² Bunnens 1995, p. 226.

¹⁰³ Peckham 1968, p. 101 and plates IV, VI, VII and VIII.

¹⁰⁴ Azize 1998, pp. 4 & 19.

3, he is also trying to make us ask just how far we, as humans, differ from animals (3:18). However, the overwhelming impression is that Qohelet is responding to a contemporary debate or belief. But do we know enough about ideas of animal and human survival to date this polemic?

A recent analysis of the *tophet* at Tyre shows that at times the bones of animals were deposited with those of infants. It is not that the children had been sacrificed, rather, those who died very young were not buried in the cemetery, the city of the dead.¹⁰⁵ It seems that the Tyrians felt a need to treat piously the remains of their very young, but that full burial in the cemetery with those who had lived for some time and developed individual personalities, was unnecessary. This may have been related to the lack of land. Gras and his colleagues observe that these animal bones were of lambs, kids and, rarely, birds such as thrushes and blackbirds. The occurrence of these bones decreases over time. On infrequent occasions, animal bones were buried alone. They suspect that the animals were buried to request a child in the place of the one being buried.¹⁰⁶ It may be so, but then why were animal bones ever buried alone? It is not, I suggest, impossible that some of these animals, perhaps the thrushes and blackbirds especially, were pets, and that there was a belief, even if not uniformly shared, in the survival of animals after death. Unfortunately, Gras does not offer any dates for the changes in the practices relating to animal bones. Despite recent research on the cult of the dead in Western Asia,¹⁰⁷ we seem to still be a long way from being able to place the polemic in *Qohelet* within one specific milieu.

In other words, without further evidence, I think it is practically impossible to properly date the original text of *Qohelet*.

6. Further questions

This essay, if incorrect in its reassessments, will be a dead end. However, if there is anything in this thesis, then it has only cleared the ground for a new exegesis, and all sorts of questions arise. It would be desirable to look at *Qohelet's* notions of causality, moral responsibility and the aim of life, to name but three issues. A thoroughgoing discussion of Nicoll's work would also be interesting. To Nicoll, Qohelet is proposing that:

... the quality of time is different from day to day. Events lie in Time and as we reach them they determine the issue of things like magnetic fields.

¹⁰⁵ Gras et al. 1991, *passim*, but especially pp. 169–73.

¹⁰⁶ *Ibid.*, pp. 169 & 173.

¹⁰⁷ See, for example, van der Toorn 1996; Lewis 1989.

According to the events and season so will things tend to fall out. ... Ecclesiastes draws a picture of man as under the domination of time and for him time is not a nothingness, a void, but a *structure of events of opposite character*, through which man is passing.¹⁰⁸

A sort of comparative spirituality may uncover many alternative and fresh interpretations of *Qohelet*. Historical research is needed to act as a check on groundless speculation. In particular, expert attention to Young's linguistic thesis could help narrow the possible datings of this enigmatic opus.

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¹⁰⁸ Nicoll 1952, pp. 83-4. See also pp. 127 & 131-2 for other comments.

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Philo's Interest in the Synagogue

M. J. MARTIN

Centre for Classics and Archaeology
School of Fine Arts, Classical Studies and Archaeology
University of Melbourne
Victoria 3010
AUSTRALIA
E-mail: matthew.martin@wanadoo.nl

Abstract

For all that we know that the institution of the synagogue was widespread in the Alexandria of the Jewish philosopher Philo's day, it remains a not often cited fact that Philo in fact makes very few direct references to this institution. What references he does make are largely restricted to his two historical treatises. It is argued that this cannot be taken to reflect a lack of interest in the synagogue on Philo's part. Whilst recognising the role of apologetic in Philo's historical works, Philo's thought and writings in general may be seen to presuppose a synagogue Judaism. Philo does not frequently discuss that which he takes for granted.

It is a commonplace of scholarship devoted to the study of the synagogue in the late Second Temple period to cite the writings of Philo of Alexandria as evidence for the role of this institution in the Judaism of the first-century Graeco-Roman Diaspora. There can be no arguing with the fact that Philo represents one of our most important sources of information concerning the Greek-speaking Judaism of the Alexandrian Diaspora. It is also certainly true that Philo mentions the synagogues of Alexandrian Judaism on a number of occasions and makes reference to the activities which were conducted therein. But precisely how important was the institution of the synagogue to Philo? It is a not oft cited fact that Philo actually makes only relatively few direct references to the synagogue in his writings. How should this paucity of references by Philo to the synagogue affect our assessment of his interest in this institution?

At the outset it is necessary to take note of the fact that the body of direct references to the institution of the synagogue in Philo's writings is

indeed small. This requires some comment. A brief examination of the *Greek Word Index to the Writings of Philo* reveals that Philo employs the term *προσευχή*, his usual term for the Alexandrian synagogue, some 19 times, all of these occurring in the two historical treatises, *In Flaccum* and *Legatio ad Gaium*.¹ In addition to this we find *συναγωγίον* employed twice to refer to synagogues (*Legat.* 311, *Somn.* 2.127), as well as *προσευκτήριον* (*Mos.* 2.216) and *διδασκαλεῖον* (*Mos.* 2.216, *Spec.* 2.62).²

Considered within the context of the thirty-six odd surviving treatises from the pen of Philo which have come down to us, this collection of references to the synagogue may be seen to be remarkably small. It may further be observed that this small dossier of references is very much dominated by those references deriving from the two historical treatises, *In Flaccum* and *Legatio ad Gaium*.

Does this relatively small number of explicit references to the synagogue on Philo's part indicate a general lack of interest in this institution?

It is true that Philo frequently expresses distaste for the masses and speaks deprecatingly of their inability to engage in the allegorical exegetical enterprise of which he is such an accomplished practitioner. For Philo, the crowds of the marketplace were characterised by the "worthless man" (ὁ φαῦλος) (*Abr.* 20). He advises his reader to maintain an aloofness from the masses, or "the common herd" (ἀγελαῖοι νομίζουσι) (*Cong.* 174), with their inclination to vice.³ With regard to the reading and explication of Scripture, Philo considers the literal, surface meaning of the text (ἡ...ἐν φανερόν ἀπόδοσις) to be the purview of οἱ πολλοί (*Abr.* 147). For those who are concerned with the apprehension of truth and the life of the soul, the allegorical meaning is paramount and must be sought out (*Abr.* 236). This latter group is a small, spiritual élite, "the people of vision" (*Plant.* 36). For Philo, this élite is especially characterised by the community of the Jewish Therapeutae described in the treatise *De Vita Contemplativa*. This ideal Jewish community is small in its membership. The community dwells in the wilderness on the shore of the Mareotic lake, apart from the multitude, ὁ ὄχλος (*Contempl.* 18-21). The members of the Therapeutic community lead ascetic lives devoted to the study of scripture and worship, thus exercising control over the physical body and its demands, and expanding their spiritual faculties.

¹ Borgen, Fuglseth and Skarsten 2000, p. 299b.

² On the nomenclature of the synagogue in Greek writings of the Hellenistic Diaspora from Second Temple times see now Binder 1999. See also Oster 1993, pp. 178-208.

³ *Mut.* 213, *Fug.* 14, *Ebr.* 26.

The institution of the Alexandrian *προσευχή* may be contrasted with this community of the Jewish spiritual élite. The *προσευχή* is ubiquitous, many examples being found throughout every region of the city of Alexandria (*Legat.* 132). The *προσευχή* is an institution of the people, of the masses. Thus, for example, we read:

the Jews every seventh day occupy themselves with the philosophy of their fathers, dedicating that time to the acquiring of knowledge and the study of the truths of nature. For what are our places of prayer throughout the cities (τὰ γὰρ κατὰ πόλεις προσευκτήρια) but schools (διδασκαλεῖα) of prudence and courage and temperance and justice (σωφροσύνης καὶ δικαιοσύνης) and also of piety, holiness and every virtue (εὐσεβείας τε καὶ ὁσιότητος καὶ συμπασης ἀρετῆς) by which duties to God and men are discerned and rightly performed? (*Mos.* 2.216)

Similarly we read:

he (Augustus) did not think that the form generally adopted about meetings should be applied to do away with the assemblages of the Jews to which they resort for collection of the first-fruits and their other religious observances (μὴ βουλῆθεις τῷ κοινῷ τύπῳ τῶν συνόδων ἀναιρεθῆναι τὰς τῶν Ἰουδαίων εἰς ταυτὸ συμφοιτήσεις ἅς ἀπαρχῶν ἕνεκα ποιοῦνται καὶ τῆς ἄλλης εὐσεβείας) (*Legat.* 316).

It is “the Jews” in general who are reported to assemble in the synagogues of Alexandria on the Sabbath to receive instruction in their ancestral Law. We might well question how serious Philo’s interest can have been in an institution which was so clearly an institution of the Jewish community at large and, hence, the crowd — οἱ πολλοί — to whom Philo held such an aversion?

It is also necessary to note that the two historical treatises to which the direct discussion of the synagogue *per se* is largely restricted, *In Flaccum* and *Legatio ad Gaium*, may be described as apologetic in character. Thus it would be possible to argue that it is the apologetic character of these treatises — the defence of Alexandrian Judaism in the face of fierce Gentile hostility — which explains their preoccupation with the synagogue and pagan attacks on this institution. If, as appears to have been the case, the Alexandrian synagogue had come to symbolise the presence of the Jewish community in the midst of the surrounding Gentile society of Alexandria, then attacks upon the Alexandrian synagogues become tantamount to an attack upon the right to lead a Jewish life in Alexandria. Thus, Philo’s defence of the institution of the synagogue in the treatises *In Flaccum* and *Legatio ad Gaium* may be read as a defence of Judaism in Alexandria in general, rather than necessarily indicating any particular interest on Philo’s part in the synagogue itself as a Jewish institution.

In summary, we may state that Philo in fact has surprisingly little to say regarding the Alexandrian synagogue. The majority of his references to this institution occur in his two historical treatises—treatises which are strongly apologetic in character and where his defence of the synagogue would appear to serve his larger goal of an apology for Alexandrian Judaism in general. Philo, in common with the thought of his age, subscribes to a highly stratified view of humanity, the majority of whom are possessed of inferior intellectual and spiritual capabilities and for whom Philo frequently expresses distaste. The Alexandrian synagogue would appear to have been, to a large extent, an institution associated with these masses. If we consider the size of Philo's surviving *oeuvre* then we cannot help but be struck by the very small number of references which he makes to the institution of the synagogue.

We must therefore repeat the question: Does this relatively small number of explicit references to the synagogue on Philo's part indicate a general lack of interest in this institution?

To this question we would formulate the following response: Whilst it might be possible to argue that Philo does not attribute to the synagogue a position of absolute centrality in his thought, we would contend that the paucity of explicit references to the synagogue cannot, of itself, be used to argue for Philo's general lack of interest in this institution.

Let us explain this statement.

Rather than an indication of a general lack of interest in the synagogue, it is possible to argue that the relatively small dossier of explicit references to this institution is indicative of the fact that Philo takes for granted the role of the synagogue as a central feature of Alexandrian Jewish life. One should not necessarily expect to find frequent defence of, or argument over, an institution which is taken for granted by the majority of Alexandrian Jews, including Philo. Indeed it might be argued that Philo's far more frequent references to the Temple, in addition to being an inherent product of his activities allegorising scriptural texts which themselves are concerned with the Temple, may be taken as a potential indication of the fact that the Temple was by far the more problematic institution for Philo's Judaism and hence in need of more frequent explication and justification.

Philo was a member of the ruling elite of the Alexandrian Jewish community. This is borne out, not only by his role as leader of the Jewish embassy to Gaius, but by the details of his life and family in general.⁴ It is also more than likely that Philo was involved in the life of the Alexandrian synagogue.

⁴ Leadership of the embassy: *Ant.* 18.259; On Philo's public life: Goodenough 1926; On Philo's family: Schwartz 1953; Foster 1976/7; Turner 1954.

The reading and explication of Scripture formed one of the central features — if not *the* central feature — of the life of the Alexandrian synagogue.⁵ Although Völker's suggestion that Philo's treatises represent records of synagogue sermons can hardly be maintained as credible,⁶ Philo's exegetical thought certainly arises out of a long-standing synagogue tradition, as has been demonstrated by Hay.⁷ Moreover, there is the distinct probability that the documents *Questiones et Solutiones in Genesim* and *Questiones et Solutiones in Exodum* represent collections of exegetical material associated with the explication of scripture in the context of the synagogue.⁸ Nikiprowetzky contended that the *quaestio* method which underlies Philo's exegetical composition explicitly reflects synagogue usage.⁹ In his description of the activities undertaken in the course of Sabbath gatherings in the synagogue, Philo speaks of one of special experience (τῶν ἐμπειροτάτων) (*Spec.*2.62), either a priest or an elder — both presumably possessed of training in the Scriptures and their interpretation — who rises to expound the Law:

But some priest who is present or one of the elders (τῶν ἱερέων δέ τις ὁ παρὼν ἢ τῶν γερόντων) reads the holy laws to them and expounds them point by point till about late afternoon, when they depart having gained both expert knowledge of the holy laws and considerable advance in piety. (*Hypoth.*7.13).

There seems little reason to doubt that Philo would have numbered himself amongst τῶν ἐμπειροτάτων — those of special experience; his production of a large body of treatises devoted to Scriptural exegesis would tend to suggest that Philo felt himself one from amongst the sages possessed of the gifts appropriate to this task.

Even if it is not possible to specifically link a particular rhetorical mode — such as the *quaestio* method — to the environment of the synagogue, it nevertheless remains that the vast majority of Philo's written output — Scriptural commentary — presupposes a synagogue Judaism. There is no evidence to suggest that the explication of Scripture ever occupied a position

⁵ On the importance of the study of Scripture in the Alexandrian synagogue and the Second Temple period synagogue in general: Philo *Somn.* 2.127, *Mos.* 2.216, *Prob.* 81-82; Levine 1987; the Theodotus Inscription cf. Roth-Gerson 1987, pp.76-86; the Masada synagogue cf. Fine 1997, p. 30.

⁶ Völker 1938.

⁷ Hay 1979-1980; Hay 1991, p. 81-97. See also Barclay 1996, pp. 161, 178; Barraclough 1984, pp. 447-448; Hamerton-Kelly 1972; Mack 1974-75, p. 75.

⁸ *Rev.Schürer.* 3.2, p. 830.

⁹ Nikiprowetzky 1977, pp. 170-180. But see Runia 1986, p. 19, n. 53. See also Borgen 1969, pp. 28-58; Borgen 1997, pp. 80-101.

of any significance in the worship of the Second Temple. Indeed, there is no evidence to suggest that the reading of Scripture ever played any significant role in the Temple cult.¹⁰ It is in the context of the synagogue that the reading and explication of Scripture becomes an important activity — the priest or elder “reads the holy laws...and expounds them point by point” (*Hypoth.* 7.13). It is these activities specifically associated with the Alexandrian synagogue that provide the social context in which Philo’s literary enterprise must be understood.

It was observed above that the two historical treatises in which the overwhelming majority of Philo’s references to the synagogue occur are both apologetic in character. It was suggested that Philo’s defence of the synagogue could be interpreted as being in service to his larger goal of an apology for Alexandrian Judaism in general, rather than necessarily arising out of any particular interest in the institution of the synagogue itself.

The apologetic character of the treatises *In Flaccum* and *Legatio ad Gaium* cannot be ignored. But it is also necessary to take stock of the fact that — turning this argument around — as soon as Philo abandons Scriptural commentary for the historical mode and a description of Alexandrian Jewish social realities, it is the institution of the synagogue which is revealed to be at the centre of these social realities. It is taken for granted that attacks on the Alexandrian synagogues are attacks on the Alexandrian Jewish community.

Ultimately, to attribute the interest in the synagogue demonstrated in these two treatises by Philo to purely apologetic motives would be to divorce Philo from the Alexandrian Jewish community in a fashion which cannot be maintained. For all that Philo may speak of οἱ πολλοί in a deprecatory manner, and for all that he may dedicate himself to the allegorical exegesis of Mosaic Law, Philo nevertheless clearly remains wholly devoted to the Alexandrian Jewish community and to the maintenance of Jewish *praxis*.¹¹ Philo’s defence of Jewish *praxis* is most clearly demonstrated in his famous critique of that group of Alexandrian Jews, the so-called radical allegorists, who would appear to have engaged in a total relativisation of the

¹⁰ There is only one occasion prescribed in the Law when Scripture was read in the Temple — the annual *Sukkoth* reading (*Deut.* 31.9-11); cf. *M. Sotah.* 7.8. It is possible that by the end of the Second Temple period the recitation of key passages of the Torah may have formed part of the Temple liturgy (so Sanders 1992, pp. 80, 117). *Baruch.* 1.14 requires the reading of *Jeremiah* during the celebrations of *Sukkoth* and a doubtful tradition in *M. Yoma.* 7.1 reports that the High Priest read the Law in the courts of the Temple on the Day of Atonement (On this tradition see Rajak and Noy 1993, p. 82). Neither of these practices are prescribed by the Law.

¹¹ Barclay 1996, pp. 173-180.

Mosaic Law (*Migr.* 89–94). Philo accuses these radical allegorists of behaving as if they led solitary lives in a wilderness (*Migr.* 90) — that is, divorcing themselves from the concerns and interests of the community at large. Philo is revealed to be no ivory tower philosopher. Moreover, elsewhere Philo indicates that the assembly in synagogues on the Sabbath for the purposes of studying Scripture, the Jews' "ancestral philosophy", is a practice instituted under Mosaic authority (*Mos.* 2.216).¹² This would seem to clearly suggest that Philo considers the Sabbath assembly in synagogues for the purposes of studying Scripture an integral part of Jewish *praxis*.

In the end, that the majority of Philo's specific references to the Alexandrian synagogue occur in the context of his two historical treatises should probably be seen as a function of the genre of these treatises — historical tracts — as compared with the majority of Philo's writings — Scriptural commentary. The institution of the synagogue post-dates the Pentateuch and, hence, is not mentioned therein. It is therefore not surprising that it receives nearly no mention in Philo's commentaries upon the Pentateuch. It is far more likely that it is this simple fact, rather than a more general lack of interest in the synagogue on Philo's part, which explains the general paucity of references to the synagogue in Philo's writings.

Ultimately, the best defence for Philo's presupposing the organisation of the synagogue at the heart of Alexandrian Jewish life is to be found in his description of the Jewish Therapeutae contained in *De Vita Contemplativa*. Philo portrays this group of Jewish ascetics as an ideal Jewish community — a community of holy sages devoting their lives to the pursuit of virtue. It can hardly be coincidence then that Philo's description of this community shows their ideal life to be organised on a model which may be seen to possess powerful analogies with the organisation of the life of the Alexandrian synagogue. The Therapeutae and Therapeutrides gather on the Sabbath to sit in silent, orderly rows whilst one from amongst their number reads aloud from Scripture and proceeds to set forth an allegorical interpretation of the text for the edification of their fellows. Thus is Philo's ideal Jewish community revealed to be a synagogue-like organisation where the reading and allegorical explication of Scripture forms a central activity.

To return to our initial question, we may state by way of conclusion that the relatively small number of explicit references to the synagogue found in Philo's writings does not indicate a general lack of interest in this institution. The general paucity of explicit references to the synagogue may be seen to be a function of both the genre of Philo's writings, as well as Philo's

¹² Compare Josephus *Apion.* 2.175; Pseudo-Philo *Bibl.Ant.* 11.8.

presupposing the synagogue to be a central institution of Alexandrian Judaism and therefore its significance being taken for granted. For all that Philo expresses distaste for the common masses, he is nevertheless devoted to the maintenance of Jewish *praxis*, and such *praxis* apparently includes the study and interpretation of Scripture in synagogue assemblies. That Philo's portrait of an ideal Jewish community, the Egyptian Jewish Therapeutae, reveals a community whose activities display powerful parallels with the practice of the Alexandrian synagogue suggests the importance of the synagogue and its practices for Philo's own Judaism.

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NOTE AND DISCUSSION

SṢṬM, ŠṢṬM, ŠṢṬM, SṢṬM or ŠṢṬM: A Technical Term for Shackling Demons. Contributions to the Babylonian Aramaic Dictionary

Christa MÜLLER-KESSLER

Institut für Sprachen und Kulturen des Vorderen Orients
Altorientalistik
Friedrich-Schiller-Universität Jena
Kahlaische Str. 1, D-07745 Jena
Fax: 00 49 3641 944802

Despite the various spellings of *SṢṬM* as *ŠṢṬM*, *ŠṢṬM*, *SṢṬM* or even *ŠṢṬM* all variant spellings are derived from the same verb *ṢṬM*. The form *SṢṬM* can be considered a *šaf'el*. The verb's alternating spellings seem to cause problems when it comes to the interpretation, translation and derivation of this verb. However, before dwelling on the semantic range of *SṢṬM* one should have a closer look at the textual evidence.

The Jewish Aramaic Dictionaries of M. Jastrow and J. Levy list just one example **שסתם** and understand it as a *šaf'el* of a Western Aramaic root *STM* derived from Hebrew "to enclose, lock up".¹ Ch. Rabin in his study on the *šaf'el* in Hebrew and Aramaic quotes also only **שסתם** and can not see any connection with Syriac and Mandaic.² This **שסתם** is attested once in the

¹ Jastrow 1950, p. 1608b; Levy 1924, vol. 3, p. 508a. Both dictionaries list an obscure variant, diverging from the printed editions that read **סתמיה**, and some MSS differ here as well.

² Rabin 1969, p. 151.

Babylonian Talmud, **שדא ליה שושילתיה ושסתמיה** “he threw his chain on him (Ashmedai) and shackled him” *Giṭṭin* 68a.³ In contrast to the printed edition the manuscript variants show interesting and probably better spellings **שיסטמיה** MS München and **שיצטמיה** MS Haggadoth Talmud.⁴ Next to **שסתם** exists also a separate entry **סטם** in the dictionaries which is taken as a *saf'el* of **טמם** or **טום** and can hardly be considered a correct etymology.⁵

Apart from the demonic context in *Giṭṭin* 68a a *saf'el* form of *STM* occurs frequently in the binding and banning formula on incantation bowls of Late Antiquity. The first example is an unpublished Nippur bowl text in Standard Literary Babylonian Aramaic (= SLBA)⁶ of which only a large fragment survives. It lists several banning verbs in the infinitive form and reads: **הדין [מ]כתבה לשצטמא ולאפקה ולרחקא כל שידא וכ[... סטנא]** **הדין [מ]כתבה לשצטמא ולאפקה ולרחקא כל שידא וכ[... סטנא]** “This written document is (destined) for shackling and expelling and removing each Šeda and eac[h...] Satana and Lilit and all destroying evil eyes” CBS 2981, ll. 1–2. The next example is the passive participle attested in a SLBA bowl text in square characters which is based on a Syriac syncretistic Vorlage [... **תא** בִּישׁ' **תא** ...] “Again is bound and shackled the evil Lilit ...” CBS 16059:11 (unpublished). Another SLBA attestation is a passive participle present form **אסיריתון** ... **ומשצטמיתון** **וסדמ[נ]יתון** **ומפקיתון** **אתון** **שידין** **ודיין** **וסטנין** **חילמי** **סנין** **וכל** **רוחי** **בישאתה** **מיניה** **ומן** **ביתה** “you are bound and shackled and fettered and expelled, you Šedas and Dews and Satans and hateful dreams and all evil Ruhas from him and from his house ...” Antonovich bowl, ll. 19–20.⁷ The last example is translated into the SLBA dialect as well, and occurs with its derived noun, **מחתנא עליכין** **סוסטמין** **דברול** **רחיה** **דברול** **ושושלן** **ד[אבר]**, **מחתנא עליכין** **סוסטמין** **דברול** **רחיה** **דברול** **ושושלן** **ד[אבר]**, “I place⁸ on you shackles of iron, a *millstone*⁹ of iron and chains of [lead]¹⁰, and I shackle you and I seal you by the great seal”. Latter was recently interpreted by Sh. Shaked as “I shall stretch over (**מתחנא**) you spears (?) of iron, ... of iron, chains of iron, and I

³ Feldblum 1966, p. 16 [Wilna edition]: (courtesy by Th. Kwasman).

⁴ Feldblum pp. 16–17.

⁵ Jastrow 1950, p. 973a.

⁶ For this new dialect term see Müller-Kessler 2001.

⁷ Geller 1980, pp. 48–49 reads **ש-סטמיתון** **ומ(ת)קניתון** **ומ**, but the bowl texts in the photograph shows clearly the reading above. There is nothing missing before **ומשצטמיתון** since the demon drawing is splitting up the line. Gordon 1984, p. 225 errs in his note to l. 22 under the presumption that **ש-סטמיתון** **ומ** is the correct reading by Geller.

⁸ On the understanding of the verb **מחתנא** and its synonym **מאתנא** see Müller-Kessler 2000, pp. 306–307.

⁹ One would have expected the absolute state **רחי**.

¹⁰ Apart from iron chains, the incantation texts mention often lead and bronze chains.

shall spear you and seal you by the great seal".¹¹ Shaked bases his translation of סוסטמין and ומסטימנא on Greek σδδμωμμ. It is clear that the words סוסטמין and ומסטימנא in this case can be hardly connected with Greek σδδμωμμ for which one would have expected a spelling ססוממא.¹² The idea of stretching a spear seems to be impossible as well.

For problems in Eastern lexicography problems one has always to consider the lexicographical situation in Mandaic. Also here the root *SSṬM* occurs in similar context with demons. The first example appears in the introductory words of the banning formula occurring on a Mandaic lead roll *gzyry' wsdymy' whrymy' 'kysy' wm'ksy' wms'ty' 'syry' wpyry' šmydy' wms'stymy' wm'ksy' wm'zyhy' lw't' ...* "condemned and penned in and anathematized (and) cut off and (surely) cut off and banned (and) bound and fettered (and) bridled and shackled and covered and expelled are the curses ..."¹³ More attestations are found in the only existing Mandaic Dictionary, that quotes from the Drower collection, *bry' 'ng'ry' 'syry' wkbjšy' wms'stymy' wm'pyqy' lb'r mn b'yt' ...* "the roof-demons (paralyse-demons) are bound and suppressed and shackled and expelled outside the house ..." Drower Collection, no. 43, ll. 199–200.¹⁴

It might be possible that the one SLBA variant מסטטימנא (Wiseman bowl) quoted above uses the Mandaic spelling with two ס. The Mandaic forms have to be spelled *SSṬM*, since in Mandaic the existence of two emphatic sounds in one word are not possible with the exception of Greek loan words. Th. Nöldeke in his Mandaic grammar considered the noun *swstym'* "shackle" a byform of Syriac *swtm'* "shackle".¹⁵ The verbal variant *SSṬM* was still unknown to him. Despite the Syriac variant it seems more likely that *swstym'* "shackle" is the nominal derivation of a *saf'el* of *ṢṬM*, since the existence of the second *s* has to be explained. The partially assimilation of *s* to *ṣ* in contact in the Standard Literary Babylonian Aramaic bowl texts have to be considered either secondary or as hypercorrect spellings.

¹¹ Shaked 1999, p. 190, B/2, ll. 9–10. The text was originally published by Geller 1976, pp. 425–426 (Wiseman bowl).

¹² ססוממא is now attested in an unpublished part of the Koiné Babylonian Aramaic bowl BM 91776, l. II:2 as אסטמומי פרולא "spears of iron", or in Mandaic *hrb' sypp'y' w'stmumy'* "swords, scimitars and spears" McCullough 1967, p. 12, ll. 4/5 (collated reading by the author); a late text passage reads with hypercorrect *ṣt*: *m'n'ly' šwb' lbwšy' d-hyrby' wsypp'y' w'ṣt'mumy' d-l'wy'ny'šy'* "I placed seven garments of swords and scimitars and spears upon my head" DC 33 A [*qm'h' šwb' lbws{n} <y>'*], ll. 50–54 (unpublished).

¹³ Greenfield and Naveh 1985, pp. 99, 103

¹⁴ Drower and Macuch 1963, p. 334. The passage is quoted according to the unpublished MS.

¹⁵ Nöldeke, p. 45, 484.

One may conclude that *SṢṬM*, *ṢṢṬM*, *ṢṢṬM* or *SṢṬM* are alternating spellings of the *saḥel* stem of the root *ṢṬM* which is attested only in Eastern Aramaic texts as a technical verb for shackling, or better for hobbling the feet of demons and fettering their wrists. This is demonstrated by drawings of crude figures of demons on incantation bowls that are displayed with shackles around neck, wrists and feet to keep them from harming.¹⁶

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¹⁶ See Hunter 1998.

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